



**THEME [INFRA-2011-1.1.3.]  
[Integrating Digital Archives and Resources for  
Research on Medieval and Modern European History]**

Grant agreement for: Combination of CP & CSA\*

**Annex I - "Description of Work"**

Project acronym: CENDARI

Project full title: " Collaborative EuropeaN Digital/Archival Infrastructure "

Grant agreement no: 284432

Version date: 2011-11-25

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# A1: Project summary

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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One form per project

## General information

Project title <sup>3</sup>	Collaborative EuropeaN Digital/Archival Infrastructure		
Starting date <sup>4</sup>	The first day of the month after the signature by the Commission		
Duration in months <sup>5</sup>	48		
Call (part) identifier <sup>6</sup>	FP7-INFRASTRUCTURES-2011-1		
Activity code(s) most relevant to your topic <sup>7</sup>	INFRA-2011-1.1.3.: Integrating Digital Archives and Resources for Research on Medieval and Modern European History		
Free keywords <sup>8</sup>	archives, digital humanities, humanities research, modern history, medieval history, first world war, DARIAH		

## Abstract <sup>9</sup>

The Collaborative EuropeaN Digital Archive Infrastructure (CENDARI) will provide and facilitate access to existing archives and resources in Europe for the study of medieval and modern European history through the development of an 'enquiry environment'. This environment will increase access to records of historic importance across the European Research Area, creating a powerful new platform for accessing and investigating historical data in a transnational fashion overcoming the national and institutional data silos that now exist. It will leverage the power of the European infrastructure for Digital Humanities (DARIAH) bringing these technical experts together with leading historians and existing research infrastructures (archives, libraries and individual digital projects) within a programme of technical research informed by cutting edge reflection on the impact of the digital age on scholarly practice.

The enquiry environment that is at the heart of this proposal will create new ways to discover meaning, a methodology not just of scale but of kind. It will create tools and workspaces that allow researchers to engage with large data sets via federated multilingual searches across heterogeneous resources while defining workflows enabling the creation of personalized research environments, shared research and teaching spaces, and annotation trails, amongst other features. This will be facilitated by multilingual authority lists of named entities (people, places, events) that will harness user involvement to add intelligence to the system. Moreover, it will develop new visual paradigms for the exploration of patterns generated by the system, from knowledge transfer and dissemination, to language usage and shifts, to the advancement and diffusion of ideas.

# A2: List of Beneficiaries

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## List of Beneficiaries

No	Name	Short name	Country	Project entry month <sup>10</sup>	Project exit month
1	THE PROVOST, FELLOWS, FOUNDATION SCHOLARS & THE OTHER MEMBERS OF BOARD OF THE COLLEGE OF THE HOLY & UNDIVIDED TRINITY OF QUEEN ELIZABETH NEAR DUBLIN	TCD	Ireland	1	48
2	FREIE UNIVERSITAET BERLIN	FUB	Germany	1	48
3	MATEMATICKI INSTITUT SANU U BEOGRADU	MISANU	Serbia	1	48
4	THE UNIVERSITY OF BIRMINGHAM	UOB	United Kingdom	1	48
5	KING'S COLLEGE LONDON	KCL	United Kingdom	1	48
6	GEORG-AUGUST-UNIVERSITAET GOETTINGEN STIFTUNG OEFFENTLICHEN RECHTS	UGOE	Germany	1	48
7	NARODNI KNIHOVNA CESKE REPUBLIKY	NKP	Czech Republic	1	48
8	SOCIETA INTERNAZIONALE PER LO STUDIO DEL MEDIOEVO LATINO-S.I.S.M.E.L.ASSOCIAZIONE	SIS	Italy	1	48
9	FONDAZIONE EZIO FRANCESCHINI ONLUS	FEF	Italy	1	48
10	UNIVERSITAET STUTTGART	USTUTT	Germany	1	48
11	INSTITUT NATIONAL DE RECHERCHE EN INFORMATIQUE ET EN AUTOMATIQUE	INRIA	France	1	48
12	Consortium of European Research Libraries	CERL	United Kingdom	1	48
13	KONINKLIJKE BIBLIOTHEEK	EL	Netherlands	1	48
14	UNIVERSITA DEGLI STUDI DI CASSINO	UNICAS	Italy	1	48

# A3: Budget Breakdown

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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One Form per Project

Participant number in this project <sup>11</sup>	Participant short name	Fund. % <sup>12</sup>	Ind. costs <sup>13</sup>	Estimated eligible costs (whole duration of the project)						Total receipts	Requested EU contribution
				RTD (A)	Coordination (B)	Support (C)	Management (D)	Other (E)	Total A+B+C+D		
1	TCD	75.0	T	165,408.00	771,691.20	159,936.00	479,300.00	0.00	1,576,335.20	0.00	1,230,356.00
2	FUB	75.0	T	115,608.00	757,396.80	0.00	6,000.00	0.00	879,004.80	0.00	599,215.00
3	MISANU	75.0	T	428,608.00	0.00	0.00	0.00	0.00	428,608.00	0.00	321,456.00
4	UOB	75.0	T	155,260.80	745,654.40	0.00	8,400.00	0.00	909,315.20	0.00	623,497.00
5	KCL	75.0	T	1,136,345.60	0.00	173,664.00	64,792.00	0.00	1,374,801.60	0.00	1,033,188.00
6	UGOE	75.0	T	858,646.40	69,760.00	131,232.00	12,000.00	0.00	1,071,638.40	0.00	790,397.00
7	NKP	75.0	S	110,768.00	107,512.00	140,154.00	0.00	0.00	358,434.00	0.00	279,557.00
8	SIS	75.0	S	79,704.00	83,646.40	0.00	12,056.00	0.00	175,406.40	0.00	127,772.00
9	FEF	50.0	S	79,704.00	92,824.00	0.00	0.00	0.00	172,528.00	0.00	101,712.00
10	USTUTT	75.0	T	0.00	83,142.40	131,232.00	29,600.00	0.00	243,974.40	0.00	172,962.00
11	INRIA	75.0	S	876,418.00	43,128.00	0.00	0.00	0.00	919,546.00	0.00	682,432.00
12	CERL	50.0	F	0.00	307,098.00	0.00	0.00	0.00	307,098.00	0.00	273,829.00
13	EL	75.0	A	218,840.00	111,819.00	0.00	0.00	0.00	330,659.00	0.00	201,767.00
14	UNICAS	75.0	T	0.00	92,502.40	0.00	0.00	0.00	92,502.40	0.00	61,860.00
<b>Total</b>				<b>4,225,310.80</b>	<b>3,266,174.60</b>	<b>736,218.00</b>	<b>612,148.00</b>	<b>0.00</b>	<b>8,839,851.40</b>	<b>0.00</b>	<b>6,500,000.00</b>

Note that the budget mentioned in this table is the total budget requested by the Beneficiary and associated Third Parties.

**\* The following funding schemes are distinguished**

Collaborative Project (if a distinction is made in the call please state which type of Collaborative project is referred to: (i) Small of medium-scale focused research project, (ii) Large-scale integrating project, (iii) Project targeted to special groups such as SMEs and other smaller actors), Network of Excellence, Coordination Action, Support Action.

**1. Project number**

The project number has been assigned by the Commission as the unique identifier for your project, and it cannot be changed. The project number **should appear on each page of the grant agreement preparation documents** to prevent errors during its handling.

**2. Project acronym**

Use the project acronym as indicated in the submitted proposal. It cannot be changed, unless agreed during the negotiations. The same acronym **should appear on each page of the grant agreement preparation documents** to prevent errors during its handling.

**3. Project title**

Use the title (preferably no longer than 200 characters) as indicated in the submitted proposal. Minor corrections are possible if agreed during the preparation of the grant agreement.

**4. Starting date**

Unless a specific (fixed) starting date is duly justified and agreed upon during the preparation of the Grant Agreement, the project will start on the first day of the month following the entry into force of the Grant Agreement (NB : entry into force = signature by the Commission). Please note that if a fixed starting date is used, you will be required to provide a detailed justification on a separate note.

**5. Duration**

Insert the duration of the project in full months.

**6. Call (part) identifier**

The Call (part) identifier is the reference number given in the call or part of the call you were addressing, as indicated in the publication of the call in the Official Journal of the European Union. You have to use the identifier given by the Commission in the letter inviting to prepare the grant agreement.

**7. Activity code**

Select the activity code from the drop-down menu.

**8. Free keywords**

Use the free keywords from your original proposal; changes and additions are possible.

**9. Abstract**

**10. The month at which the participant joined the consortium, month 1 marking the start date of the project, and all other start dates being relative to this start date.**

**11. The number allocated by the Consortium to the participant for this project.**

**12. Include the funding % for RTD/Innovation – either 50% or 75%**

**13. Indirect cost model**

**A: Actual Costs**

**S: Actual Costs Simplified Method**

**T: Transitional Flat rate**

**F :Flat Rate**

# Workplan Tables

Project number

284432

Project title

CENDARI—Collaborative European Digital/Archival Infrastructure

Call (part) identifier

FP7-INFRASTRUCTURES-2011-1

Funding scheme

Combination of CP & CSA





# WT1

## List of work packages

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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### LIST OF WORK PACKAGES (WP)

WP Number <sup>53</sup>	WP Title	Type of activity <sup>54</sup>	Lead beneficiary number <sup>55</sup>	Person-months <sup>56</sup>	Start month <sup>57</sup>	End month <sup>58</sup>
WP 1	Management	MGT	1	64.50	1	48
WP 2	Dissemination and Sustainability	COORD	1	45.00	1	48
WP 3	Training and Transnational Access Coordination	COORD	4	61.00	1	48
WP 4	Methodology and Archive User Requirements	COORD	4	88.00	1	48
WP 5	Investigation and description of archives	COORD	2	197.00	1	48
WP 6	Knowledge Organisation Framework	RTD	5	160.00	1	48
WP 7	Data Integration and Semantic Services	RTD	3	179.00	1	48
WP 8	Research Processes and System Architecture	RTD	6	109.00	1	48
WP 9	Research Spaces	RTD	11	117.00	1	48
WP 10	Transnational Access: Czech National Library	SUPP	7	0.00	12	48
WP 11	Transnational Access: University of Stuttgart and Bibliothek fuer Zeitgeschichte	SUPP	10	0.00	12	48
WP 12	Transnational Access: Trinity College Dublin	SUPP	1	0.00	12	48
WP 13	Transnational Access: Kings College London	SUPP	5	0.00	12	48
WP 14	Transnational Access: University of Goettingen	SUPP	6	0.00	12	48
Total				1,020.50		

# WT2: List of Deliverables

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## List of Deliverables - to be submitted for review to EC

Deliverable Number <sup>61</sup>	Deliverable Title	WP number <sup>53</sup>	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D2.1	Communications Launch	2	1	6.00	O	PU	2
D2.2	Dissemination Strategy	2	1	12.00	R	PP	6
D2.4	Business plan	2	1	12.00	R	PU	48
D3.1	Training module release	3	4	18.00	R	PU	36
D3.2	Access outcomes report	3	12	8.00	R	PU	45
D4.1	Report on archival research practice	4	7	15.00	R	PU	24
D4.2	Domain Use Cases	4	4	24.00	R	PU	18
D4.3	Expert Seminar proceedings	4	4	21.00	R	PU	45
D4.4	Report on Digital Methodologies	4	8	21.00	R	PU	36
D5.1	Archive Directory	5	2	36.00	O	PU	24
D5.2	Archival Research Guides	5	2	144.00	R	PU	46
D6.1	Common metadata schema	6	13	16.00	O	PU	18
D6.2	Guidelines for applying the schema	6	13	8.00	O	PU	18
D6.3	Guidelines for Ontology building	6	5	12.00	O	PU	24
D6.4	Publish Ontologies	6	5	86.00	O	PU	42
D7.1	Archival description toolkit (first stable release)	7	7	30.00	P	PP	12
D7.2	Data integration toolkit and	7	5	42.00	P	PP	24

# WT2: List of Deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	WP number <sup>53</sup>	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
	repository (first stable release)						
D7.3	Ontology toolkit (first stable release)	7	5	35.00	P	PP	18
D7.4	Final releases of toolkits	7	3	63.00	O	PU	48
D8.1	Functional Description, portal and VRE	8	8	8.00	O	PP	8
D8.2	Functional Description: visualisation	8	6	12.00	R	PP	12
D8.3	Architecture description (portal, VRE, visualisation)	8	11	6.00	P	PP	12
D8.4	Model for representing provenance of transformation and integration processes	8	7	5.00	R	PP	28
D8.5	Documentation of tools	8	6	24.00	R	PU	45
D9.1	Prototype for search and faceted search tools	9	6	12.00	P	PP	12
D9.2	Full Release Portal/VRE	9	11	36.00	O	PU	36
D9.3	Overview of Current Use at Partner Archives	9	11	36.00	R	PU	45
D10.1	Delivery of Transnational Access, NKP	10	7	0.00	O	PU	48
D11.1	Delivery of Transnational Access, BfZ	11	10	0.00	O	PU	48
D12.1	Delivery of Transnational Access, TCD	12	1	0.00	O	PU	48

# WT2: List of Deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	WP number <sup>53</sup>	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D13.1	Delivery of Transnational Access, KCL	13	5	0.00	O	PU	48
D14.1	Delivery of Transnational Access, UGOE	14	6	0.00	O	PU	48
Total				748.00			

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP1	Type of activity <sup>54</sup>	MGT
Work package title	Management		
Start month	1		
End month	48		
Lead beneficiary number <sup>55</sup>	1		

## Objectives

-to coordinate the overall project with respect to administrative, financial and technical cooperation, and act as the single point of contact for the Commission for the project  
 -to maintain communications between partners and oversee balanced development of the project with regards to scientific matters  
 -to monitor and manage overall project progress

## Description of work and role of partners

### General Description

This work package will deliver overall coordination between the various work packages, partners and non-partner stakeholders involved in the CENDARI project (eg DARIAH), as well as maintaining administrative control over its activities. It will ensure timely delivery on all agreed milestones and financial accountability across the partners. It will ensure that the activities of the layers of management in the CENDARI governance structure are all coordinated: these layers are:

- General Assembly as the ultimate decision-making body of the Consortium
- Executive Board as the supervisory body for the execution of the Project which shall report to and be accountable to the General Assembly
- The Coordinator is the legal entity acting as the intermediary between the Parties and the European Commission. The Coordinator shall, in addition to its responsibilities as a Party, perform the tasks assigned to it as described in the EC-GA and the CENDARI Consortium Agreement.
- External Expert Advisory Board (EEAB)

The EEAB shall assist and facilitate the decisions made by the General Assembly, and ensure that CENDARI's developments are in line with international norms for best practice. They will also act as a peer review committee for applications for transnational access

The overall coordination for CENDARI will be overseen and managed by the Coordinator (TCD), although most of the day-to-day tasks will fall to the Project Manager (TCD, to be recruited) with assistance as well, particularly in the areas of finance/accounting and harmonisation with TCD policies and procedures (eg for facility usage, procurement etc) from the Trinity Long Room Hub Executive Officer. The duties to be carried out by this team under this workpackage include: monitor progress of all partners toward agreed consortium goals; provision of overall clarity of communications between project participants and other stakeholders (eg the European Commission, Dariah); identify, query and seek solutions where there are exceptions to expected progress; coordinate and deliver financial and technical reports to the European Commission in a timely and complete fashion; provision of general support to the partners in terms of their liaison with the EC; maintain the overall budget for the project; ensure all payments are made and documented; calling, planning and servicing of all central and coordinating project meetings (including those of the External Expert Advisory Board), including and in particular working with the local hosts when the General Assembly meetings are held outside of Dublin in years 2-4 of the programme, to ensure that there is consistency between the meetings and that all organisational details are communicated effectively; among other duties.

USTUTT, SISMEL and KCL will contribute to this workpackage by providing coordination between groups of strongly interconnected workpackages, including harmonization of activities across the workpackage and consolidation of reporting on shared activities. They will also act as local hosts for one General Assembly

# WT3: Work package description

meeting each and contribute to the coordination between partners/WPs with specific shared characteristics: archival, researcher, technical.

This workpackage includes budget for supporting travel and subsistence for consortium members to attend 5 full General Assembly meetings (a kick-off meeting plus one at end of each year of activity) and 5 further individual journeys within Europe for the management team to deliver specific key tasks with partners. It also includes budget for 4 meetings of the 8-member External Expert Advisory Board (EEAB), equipment costs to cover the requirements of the newly hired Project Manager, consumables to cover meeting costs and office/network support costs, and subcontractor costs to cover 3 audit certificates.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	TCD	54.50
5	KCL	4.00
8	SIS	3.00
10	USTUTT	3.00
	Total	64.50

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
		Total	0.00			

## Description of deliverables

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## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS1	Recruitment of External Expert Advisory Board	1	6	By this date a full slate of 10 nominated experts shall have been recruited, and a list of members can be made available through the CENDARI website
MS12	Handover	1	48	For agreement by partners and with DARIAH

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP2	Type of activity <sup>54</sup>	COORD
Work package title	Dissemination and Sustainability		
Start month	1		
End month	48		
Lead beneficiary number <sup>55</sup>	1		

## Objectives

-to disseminate knowledge resulting from the CENDARI project to a large audience of stakeholders and users, and to maximize the impact of investment in the programme and to promote the project within each community of stakeholders and raise the awareness of the possibilities opened up by the infrastructure.  
 -to promote long term sustainability, including involvement of DARIAH and funders and the preparation of a business plan beyond the end of the project

## Description of work and role of partners

The goals of this work package are to ensure that CENDARI has a significant impact among the target groups it sets out to serve and develops and maintains good relationships with them. These target groups are: Museums, libraries and archives (specialised in our testbed fields and beyond, including their support staff); Research users of archives (history; technological, and interdisciplinary, in particular younger and/or less technologically confident researchers;); Research institutions; Research infrastructures, in particular DARIAH; Government and affiliated policy agencies; Industry (esp IT and publishing); Print and broadcast media; and the general public.

This work package contains two distinct tasks: 1) publicity and dissemination and 2) sustainability planning

Task 1: The CENDARI coordinator at TCD will take overall responsibility for the Dissemination programme, with substantial assistance from her team in the Trinity Long Room Hub. This will include tendering for the website and branding development; drafting a strategy for mapping communications instruments onto desired audiences; development and delivery of a regular programme of communications among project partners and within the stakeholder community; creation and maintenance of mailing lists of interested museums, libraries, archives, researchers and other stakeholders; drafting and agreement of press releases for the project including at the project launch and conclusion; coordination of a project launch event; response to requests for information about the project; preparation of a communications review and clippings file for each annual meeting of the general assembly; coordination and capture of publications and conference publications across the network; maintenance of regular updates to the project website and social media presence; provision of interface with other workpackages with specialised needs for dissemination, for example advertisement of mobility opportunities. EL staff will provide specialist advice to TCD and supplement these activities with specific brief for enhancing our communications with the Library sector and with high-profile projects such as Europeana. In the final year of the project, many of this WP's activities will be dedicated to embedding the final infrastructure into the activities of the interested groups of archives and scholars, across the regions of Europe. This will be achieved by and large through the hosting of a final international conference focused on the challenges and opportunities of integrating digital archival resources for medieval and modern history.

The budget for this task of this workpackage has made provision for three regional launch events to be held at archive partners institutions with different specialisations (travel for partners plus event costs).

Task 2: The work required to best model for the sustainability of the CENDARI network and electronic presence is strategic, designed to ensure that CENDARI continues to exist as an accessible e-infrastructure; to grow and develop over time and in line with user needs; to be able to ingest content as it becomes available in digital form; to support the development of capacity for digital integration among the smaller archives of Europe; and to be responsibly and efficiently managed and delivered. It will also look toward the extensibility of the platform to include research areas beyond the test case, becoming an extensible resource and example of best practice in

# WT3: Work package description

the vertical and horizontal integration of e-resources. The solutions to these possible barriers to longevity will be addressed from an early point in the project via a number of avenues, including: re-usage of existing DARIAH services, and the re-integration of aspects of the CENDARI infrastructure into DARIAH; efficiencies with other cognate data infrastructures, such as the EHRI; negotiation with commercial publishers and other entities as to any possible mutually beneficial model for cost sharing that might be developed. These activities will be guided by a CENDARI business plan, which will be created and agreed after the midpoint of the project development.

Tasks which will support the delivery of the aims of this work package will include: a workshop focussing on reuse and sustaining vibrancy of digital resources which will also commence creation of the business plan; drafting and agreeing a this plan; concluding collaboration agreements concluded with delivery partners for post-funded period: including institutions, organizations (e.g. DARIAH) and companies; and creating accession pathways that reach beyond the end of the funded period and an handover plan for the resource.

The objectives of this workpackage will be primarily delivered by the Coordinator (TCD) with input and assistance from her team at TCD and the CENDARI project manager (to be recruited). In specific these objectives will be to: coordinate among partners to draft and agree a business plan (including mission/vision, context, resources and audiences); build upon this initial work to create a plan for the technical, financial, intellectual and administrative sustainability of CENDARI beyond the funded period; liaise closely throughout the project to develop a well-honed understanding of CENDARI user needs; create in particular a set of agreed and sustainable policies and procedures for the accession of new material into CENDARI after the funded phase of project activity concludes; lead the administrative aspects of the handover of the CENDARI infrastructure from the funded partners to its long term home; develop relationships with public and private stakeholders with an interest in the future of CENDARI, so as to secure funding for its continuation after the funded period. INRIA, UOB, and CERL each represent a particular CENDARI interest group (technical, historical researcher and library/archival) and they will contribute specifically to the development of the reports and policies, consulting among their peers and drafting/revising documentation to reflect their perspectives throughout the course of the project, thereby ensuring that the sustainability planning does not overoptimise at any point for any one user community over the needs of the others.

The budget for this workpackage covers the one workshop on the sustainability of integrated digital archival resources, with travel and subsistence included for 8 speakers from across the EU. It also provides for 10 meetings across the four year period for meeting with partners to develop the business plan and long tem access/handover protocols and to discuss cooperation with DARIAH and other potential long-term partners for the CENDARI development.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	TCD	30.00
4	UOB	4.00
11	INRIA	4.00
12	CERL	4.00
13	EL	3.00
	Total	45.00

## List of deliverables

Delive- rable Number <sup>61</sup>	Deliverable Title	Lead benefi- ciary number	Estimated indicative person- months	Nature <sup>62</sup>	Dissemi- nation level <sup>63</sup>	Delivery date <sup>64</sup>
D2.1	Communications Launch	1	6.00	O	PU	2



# WT3: Work package description

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D2.2	Dissemination Strategy	1	12.00	R	PP	6
D2.4	Business plan	1	12.00	R	PU	48
			Total			30.00

## Description of deliverables

D2.1) Communications Launch: Launch of project, including: e-communications (website, network pages, update emails et al), press releases to relevant news outlets regarding project aims and goals, stakeholder networking events to raise awareness of the project at an early stage. [month 2]

D2.2) Dissemination Strategy: Creation of a dissemination and communications strategy, including target mapping. This document will be prepared in a highly consultative manner and shared among all of the partners to guide the communications programme around CENDARI. [month 6]

D2.4) Business plan: This document will act as a roadmap for sustainability of the CENDARI resources beyond the funded period. It will identify those aspects of the project that will be maintained by DARIAH directly and (more importantly) the manner in which the CENDARI platform will be maintained and extended from an administrative as well as technical standpoint. It will cover: funding, resources, limitations, future migrations and other headings. Particular aspects of this plan will be the Accession strategy outlining protocols for deposit after the funded period. It will include access pathways suitable to a number of archive types (according to scale, type of collection, resources, standards etc), expected costs of accession and possible resources for accession and the technical and administrative handover plan, which will be agreed with DARIAH at an early date and implemented overtime to ensure uninterrupted service to users. [month 48]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS11	Business Plan	1	32	To be consulted and agreed by partners
MS12	Handover	1	48	For agreement by partners and with DARIAH

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP3	Type of activity <sup>54</sup>	COORD
Work package title	Training and Transnational Access Coordination		
Start month	1		
End month	48		
Lead beneficiary number <sup>55</sup>	4		

## Objectives

- to deliver training to researchers and archive/library personnel at all career stages
- to coordinate and manage the transnational access and service activities of CENDARI

## Description of work and role of partners

This work package contains two tasks: 1) training and 2) coordination of transnational access.

Task 1: The more generic communications materials CENDARI produces will be supplemented by a targeted range of training opportunities (face-to-face, in the form of Summer Schools) and materials (printed and on-line) to support the use of the CENDARI portal. We will target early-career researchers by integrating our training activities into existing doctoral and postdoctoral programmes and collaborating with the relevant scholarly networks to bring our platform and training activities to the attention of graduate students. The International Society for First World War Studies and the Consortium of European Research Libraries (CERL) are two such critical partners in this respect, as they will contribute to the organization of summer schools aimed at the younger generation of scholars, librarians and archivists.

UOB will lead the training programme and ensure coordination with WP3, in particular as concerns that work package's expert seminar programme. The first phase of this work will concentrate on devising a training strategy in line with the overall objectives of the work-package, the community and the project as a well. This phase will last approximately one month and employ two researchers. To do this they will look at both the opportunities already available as well as the information on user needs being generated in WP 3. They will identify the centres of excellence and graduate programmes both within and outside the network of CENDARI partners which would directly benefit from the training activities. Likewise, they will also concentrate on museums, libraries and archives across Europe to identify and mobilize those custodians of "hidden" archives who stand to benefit most from the CENDARI platform. This first phase will therefore see the design of the on-line materials and summer school curriculum around which the second phase of their work will revolve.

This second phase will start in the second year of the project and see the design of training materials (printed and on-line) and the organization of 3 summer schools. Running parallel to and informed by the expert seminars run by WP3, these summer schools will involve up to 20 PhD students, early-career researchers, and archivists recruited through Europe-wide calls for participants. Their recruitment will be facilitated by the mobilisation of the partners' networks, including of course UOB/the International Society for First World War Studies, SIS and CERL. The summer schools will use, test, and help revise the on-line and printed training materials. They will take place at museums, libraries and archives to combine the pedagogical, historiographical and curatorial reflections and to embed it into the end-users' own professional and scientific context. This phase will last 36 months.

This budget for this task of WP 3 makes allowance for 12 bursaries to each of the 3 summer schools (to ensure that early stage researchers have equal access to the training opportunities CENDARI provides). In addition to these intensive week-long training experiences, a series of 5 one-day workshops will be held in regions across the EC in the last 18 months of the project, introducing up to 20 self-funding participants each to the basic capacities of the CENDARI portal. This task also includes provision for design, print and delivery of the teaching materials; the hosting costs for the Summer Schools (space and hospitality) and a budget to support speakers travel and subsistence, support costs, and consumables for the final international conference.

# WT3: Work package description

Task 2: CERL will manage the transnational access throughout the network. TCD will assist in the liaison with partners and External Expert Advisory Board (described in Annex B, which will act as a selection committee for access placements, as per the disciplinary norms), organisation of these evaluation meetings, and follow-up with researchers after their placements.

In each of years two to four, therefore, we will have open calls for researchers working in the subject areas of the testbed cases, each facilitating 4 scholars per year (2 per domain, including those at PhD level) to undertake investigations on projects of their choice for which access to our partner archives is required. Their research residence will be of between 6 and 12 weeks at one of the access granting institutions. This call will be widely publicised to our audiences through the extensive networks of our full partners and through the wide range of instruments.

Specific tasks associated with the delivery of these aims will include: setting criteria with NKP and USTUTT for the applications for funded researcher places; releasing and widely disseminating the calls for applicants; responding to applicant queries; accepting and consolidating the valid applications into a digestible form for reviewers; agreeing a process with the Advisory Board members for evaluating applications and selecting researchers for funding; carrying out this process and communicating the outcomes to applicants; supporting user needs in advance of their arrival and while in situ; holding exit interviews with the researcher participants to gauge how the CENDARI access infrastructure can be most effectively deployed to meet their needs; keeping statistics on this feedback and disseminating results; holding testing sessions with the late researcher participants to gauge how the CENDARI infrastructure can be most effectively deployed to meet their needs; creating a final report on the outcomes of the CENDARI transnational access and service programme.

There are no specific events associated with this strand of the workpackage, as evaluation for transnational access will take place at the meetings of the External Expert Advisory Board (see WP 1).

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	TCD	6.00
4	UOB	24.00
7	NKP	6.00
10	USTUTT	9.00
12	CERL	16.00
	Total	61.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D3.1	Training module release	4	18.00	R	PU	36
D3.2	Access outcomes report	12	8.00	R	PU	45
	Total		26.00			

## Description of deliverables

D3.1) Training module release: These training modules will cover both the generic and specific challenges researchers will face in using the CENDARI platform. As such it will cover items such as basic access and sign-on to the portal, constructing searches, understanding and filtering search results, creating a personal research materials collection, and using the tool kit incorporated into the CENDARI interface, as well as covering

# WT3: Work package description

issues such as the nature of the collection descriptions in CENDARI and how to find further information less well-described collections. The first release will be online only to facilitate testing. [month 36]

D3.2) Access outcomes report: Report on the outcomes of the CENDARI transnational access programme, to include a record of selection process and total number/duration of access visits in the programme, as well as user feedback on the impact of the access opportunities on their work. [month 45]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS1	Recruitment of External Expert Advisory Board	1	6	By this date a full slate of 10 nominated experts shall have been recruited, and a list of members can be made available through the CENDARI website
MS8	First funding call released	1	13	The release of this critical first call will require both the recruitment and evaluation procedures to have been agreed by all partners
MS9	First formal feedback loop completed	6	18	Due to the iterative nature of agile development, this first loop will prove both the method and the progress rate of CENDARI development

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP4	Type of activity <sup>54</sup>	COORD
Work package title	Methodology and Archive User Requirements		
Start month	1		
End month	48		
Lead beneficiary number <sup>55</sup>	4		

## Objectives

- to strengthen the CENDARI community
- to develop use cases for the CENDARI enquiry environment
- to understand and define best practice in the delivery and use of digital archival resources for medieval and modern history
- to understand and address the implications of archival integration through a consolidated infrastructure for the study of history
- to identify the comparative and technology-driven methodological challenges specific to historical study in the medieval and modern periods

## Description of work and role of partners

This Work Package will ensure that the integrating technical platform developed by CENDARI is aligned with the needs of the research community it is intended to support. CENDARI will only be able to build a successful user base upon a thorough understanding of the historiographical and methodological challenges these users will face, and the outcomes of this WP will therefore include use cases and reports on best practice that can act as informative guides and models for approaching the infrastructure. To do this it will build consensus around a definition of methodology, and disseminate current methodological best practice for the use of dispersed archival records (analogue and digital). One specific outcome of the workpackage will be a user needs assessment that will inform all aspects of the technical development of the CENDARI interface and underlying search and retrieval systems. The work package will address four interlinked areas:

1. Use cases describing existing practices
2. Archival research practices with a focus on fragmentation and integration, archival intelligence, the use and interpretation of archival sources, and the impact of an integrating digital infrastructure to these practices
3. The use and application of digital methodologies in the two domain areas, including the methodological challenges of integrating source materials (issues of provenance for example), and geography, names, visualisation etc.
4. Expert seminars to bring together the researchers funded through the trans-national access with archivists, librarians, e-scientists and other domain scholars to share insights and ideas and to encourage and support further use of the CENDARI infrastructure.

The work for the use cases will comprise of desk research and interviews with researchers to capture and model their existing research practices into use cases. This work will be undertaken by UOB, UGOE, SIS and NKP. The development process will include meetings and interviews with researchers and the CENDARI partners to generate a common understanding of their research practices, and to create detailed use cases describing these practices.

A second phase of work will bring together archivists, librarians, researchers and e-scientists in a series of two two-day workshops - one each for each domain area. This phase will create a firm basis for networking activities between researchers, archivists and e-scientists by undertaking an analysis of archival research practice, and more specifically the methodological challenges it presents (e.g. regarding archival fragmentation and inaccessibility, and the impact on the development of comparative history). These workshops will explore the implications of the published record regarding archival fragmentation, challenging the current understanding and

# WT3: Work package description

drawing overarching conclusions on the state of historical archival research and the opportunities for integration presented by the digital age.

The third phase of work will address the methodological challenges of integrating archival sources into a digital infrastructure with a particular emphasis on the use and value of digital humanities methodologies including geographical, visualisation, names, languages, networks etc. This record of best practice can then be disseminated and discussed by the virtual community from which it arises. Three two-day workshops will be held, two domain workshops, and one to coincide with the Digital Humanities conference in order to engage fully with the DH community.

The fourth phase of the work package's activities will centre around the nascent integrated collections themselves, with presentations prepared by the participants on the basis of data sets coalescing in the CENDARI infrastructure. In particular researchers who have taken advantage of the trans-national access offered by CENDARI will be invited to attend and present their findings. For these three seminars (two domain, one digital humanities) participants will be asked to prepare their investigations beforehand and submit them in a written form for publication afterward. The insights gained will further feed in to the usability data required by the technical development, while also surfacing possibly unexpected implications or lacunae in the provision of data. These seminars will greatly strengthen the links between the partners and the archives, feeding into a robust infrastructure and long term strengthening of the scholarly networks. The results will be prepared for publication, and thereby disseminated beyond the immediate participants as well.

UOB will lead the work package and ensure that the methodological challenges raised by the fragmentation of archival resources are properly identified and resolved through the construction of the CENDARI platform and transnational access. UOB will not only liaise directly with other WPs but will contribute coherent historical inputs into the design of research environment as well as leading the process of modelling usage scenarios. UBH will oversee the production of the historiographical guides and coordinate the production of the outcomes of the expert seminars in a format for wide dissemination.

SIS will provide leading expertise in Medieval Studies and contribute directly to the use cases and workshops. FUB will provide supporting expertise in First World War Studies and contribute directly to the expert seminars and their outcomes. NKP will provide expertise in scholarly archival and library research and contribute directly to the archival workshops. UGOE will provide the link with the e-science and digital humanities communities, and play a critical role in the development of the use cases and the workshops. CERL will contribute to this workpackage by assisting in the enhancing of the researcher domain knowledge required for the ontological framework from an information science perspective.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
2	FUB	10.00
4	UOB	30.00
6	UGOE	7.00
7	NKP	10.00
8	SIS	24.00
12	CERL	7.00
	Total	88.00

# WT3: Work package description

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D4.1	Report on archival research practice	7	15.00	R	PU	24
D4.2	Domain Use Cases	4	24.00	R	PU	18
D4.3	Expert Seminar proceedings	4	21.00	R	PU	45
D4.4	Report on Digital Methodologies	8	21.00	R	PU	36
Total			81.00			

## Description of deliverables

D4.1) Report on archival research practice: This report will give an overview of archival usage and practice, providing an underlying basis for decisions regarding the integration of content within CENDARI. It will comprise the outcomes from the two workshops plus an overarching analysis to identify commonalities and differences between the two domains. [month 24]

D4.2) Domain Use Cases: The Use Cases will provide detailed information on research practices in the two domain areas with information that can be translated into user specifications. [month 18]

D4.3) Expert Seminar proceedings: These volumes will allow the insights on the methodological challenges exposed in the CENDARI expert seminars to be captured and shared among archives and researchers. They will reflect the challenges discussed 1) across CENDARI periods 2) between CENDARI stakeholder groups and 3) focusing on interdisciplinary approaches to European experience – History, Social Sciences and Cultural Critique. They will capture the use case studies as well as the more theoretical considerations, and a consideration of the role of the digital humanities in domain research practices. [month 45]

D4.4) Report on Digital Methodologies: This report will provide an overview of the use and value of digital methodologies to research in the two domain areas, and the digital humanities. It will comprise the outcomes from the three workshops plus an overarching analysis to identify commonalities and differences between the two domains and the intersections with the digital humanities. [month 36]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS3	User requirements defined	4	6	This refers to the assessment by the methodological experts of what the user requirements are, and the ability of the technical team to translate them from that level of specificity into delivery
MS9	First formal feedback loop completed	6	18	Due to the iterative nature of agile development, this first loop will prove both the method and the progress

# WT3: Work package description

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
				rate of CENDARI development



# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP5	Type of activity <sup>54</sup>	COORD
Work package title	Investigation and description of archives		
Start month	1		
End month	48		
Lead beneficiary number <sup>55</sup>	2		

## Objectives

- to enhance the accessibility and visibility of unique historical archives and collections across Europe through the creation of an electronic Directory for medieval and modern history
- to enhance the accessibility and visibility of unique historical archives and collections across Europe through the creation of research guides to medieval and modern history
- to engage a broad network of archives and other resource holders for medieval and modern history in the development of the CENDARI platform to support comparative historical approaches

## Description of work and role of partners

This workpackage has two strands: First to identify, describe and catalogue archival holdings and other collections of value for research (e.g. library special collections, scholarly collections) and to compile these into an on-line Directory. This Directory will form the backbone along which digital content can be integrated into a delivery portal that reaches across institutional and national boundaries, while also facilitating visibility of and access to archives which might currently be unknown to potential users. Second, to create a series of research guides which will provide rich information gateways connecting archives and collections located in physically separate places, and extended with information about the provenance and history of the collections.

For the first task of this workpackage the project team researchers will compile (via desk research, referrals and telephone conversations) a comprehensive Directory of Medieval and World War 1 related archives/ collections. An initial list will be composed followed by richer descriptions using the metadata schema created in WP6. The project will aim to identify and describe between 600-800 collections for the modern period and between 250-500 for the medieval period. This work will take place over the first two years of the project. The workpackage will focus on the creation of a network of archives, resulting in a descriptive directory of these archives and the resources they hold which are relevant for the subject areas of the two CENDARI domains. Directory records will either be created by the workpackage team or by integrating finding aids or catalogue records where these exist.

Once the initial list is developed the project team for each domain area will agree a priority list for the archives/collections for inclusion in the research guides. For the modern period special emphasis will be placed on the unexplored, smaller archives all across Europe and particularly Eastern and South East Europe, and for the medieval period emphasis will be on enriching and connecting across existing digital collections and cross-referencing these with information about archival holdings and other collections of interest. The researchers will visit the archives and collection holders, building network relationships with their staff, scoping their relevant collections, gathering information about the present state of the archival collections, and creating rich contextualised descriptions of the holdings. As the researchers develop their rich descriptions of the archives and their holdings, they will organise that information as the research guides, or pathways, that will act as the connective tissue that connects across institutions, regions and events, providing detailed and informative overviews across individual collection level entries. Site visits may be as short as a few days where rich finding aids and contextual information already exists. In less well-developed archives, more time may be required to understand the collections and to create the rich information required, from 2 weeks to 2 months for the richest but least accessible collections. The researchers will also maintain contact with the archives they visit, so that they may be tapped as appropriate as participants in the activities of other workpackages, such as the summer schools (WP3) and expert seminars (WP 4).

# WT3: Work package description

Between 16 - 20 research guides will be produced for the modern period, and between 6-10 for the medieval period. Each Guide will take approximately 6 months to produce including site visits, analysis and compilation of connective information across collections. Additional time and investment will be used to cover editing and translation services and to allow EL and NKP to coordinate the technical needs of archives that want to make their content available through CENDARI, but which need some technical consultancy in order to do so. In general, archives are willing to make their material accessible to CENDARI voluntarily. In some cases, however, where archives are lack the staff or skills to do this, assistance from CENDARI project team members (who best understand the exact requirements of the infrastructure) will be provided. This may consist of creating metadata or database crosswalks or related scripting, review and specialist advice on digital capture or curation standards, or other technical development that is required for the integration of content.

The researchers based at TCD, FUB, UOB will undertake the work to compile the research guides for the modern period, and NKP, FEF, and UNICAS will do the same for the medieval period. In addition each group will provide domain expertise for the creation of the Directory. NKP and EL will undertake the work to create the Directory with guidance and input from the domain experts.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	TCD	24.00
2	FUB	67.00
4	UOB	24.00
7	NKP	12.00
9	FEF	30.00
13	EL	10.00
14	UNICAS	30.00
	Total	197.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D5.1	Archive Directory	2	36.00	O	PU	24
D5.2	Archival Research Guides	2	144.00	R	PU	46
	Total		180.00			

## Description of deliverables

D5.1) Archive Directory: Comprehensive Directory of Medieval and World War 1 related archival collections across the regional and national boundaries. [month 24]

D5.2) Archival Research Guides: Detailed Guides to the collections in the archives and collections to act as the connective tissues across collections with rich, contextualised information. [month 46]

# WT3: Work package description

Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS2	Archive directory complete	2	6	As a first phase of archival discovery, this listing will become the backbone for the future gathering of archival holding description
MS4	Guide framework established	2	9	Format signed off by technical and historian/archival participants
MS6	Ontologies defined	5	12	Agreement among WPs communicated to coordinator and technical leaders

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP6	Type of activity <sup>54</sup>	RTD
Work package title	Knowledge Organisation Framework		
Start month	1		
End month	48		
Lead beneficiary number <sup>55</sup>	5		

## Objectives

The Knowledge Organisation Framework Work Package will research and build an ontological framework to model and link the dispersed Archives for Medieval and 1st World War scholarship. The objectives are to:

- Ensure interoperability and compatibility of heterogeneous archival descriptions and catalogues by creating a common metadata format
- Build a foundation 'scholarly archival sources' ontology with which to create an inventory of archives for 1st World War and Medieval Europe in WP3, and to enrich the metadata descriptions
- Build flexible domain ontologies for "World War 1" and "Medieval Europe" to complement the foundation ontology
- Adapt (where possible) or create standards and guidelines for the use of the common metadata format, and guidelines for applying the Ontologies

## Description of work and role of partners

WP6 will research and develop the conceptual framework that will underpin the integration and visualisation of the dispersed archival collections of the CENDARI infrastructure. The framework will include a common metadata profile to integrate archival descriptions and a set of Ontologies that will provide flexible, rich and multi-relational historical classification schemes. This knowledge framework will act as a key mechanism to virtually integrate the dispersed CENDARI sources by situating them in their historical and scholarly contexts. The classification schemes will be dynamic in that researchers can review and change them according to their specific interests.

The CENDARI Knowledge Organisation Framework (KOF) will incorporate:

- A common metadata schema that models and integrates the local cataloguing systems used by the participating archives
- A set of Ontologies centred around classes of concepts that are applicable to the archival sources and the historical and scholarly contexts in which they will be applied
- Supporting standards and guidelines for the application of the metadata model and Ontologies

We will support searching and browsing across archival catalogues by developing a common metadata profile that integrates the formats used by the various local cataloguing systems of the participating archives. We will identify the standards currently in use, such as EAD, ISAD(G) and Dublin Core, and describe them in such a way that they can be easily understood by existing and potential new partners. This metadata profile will be developed in close collaboration with the archivists and will adhere to accepted international standards. In transferring the metadata to CENDARI through the metadata profile we will retain the original metadata in order not to lose the richness of these descriptions. This will ensure that subsequent improvements can be made to the common metadata profile in the longer term. Crosswalks will be developed that map metadata records from the various source formats into the common format. This work will collaborate closely with, and contribute to, the meta-data modelling methodology that is being developed in ISO/TC 37/SC 4.

Alongside the common metadata schema we will research into and develop a set of Ontologies that model the scholarly context in which the archives will be used. We will start by undertaking desk research into existing ontologies and assess their utility for CENDARI. Subject to the findings of our desk research we will either adapt or create the required ontologies. We will start with a general ontology that expresses the nature and type of the archival sources themselves, including between object types e.g. manuscripts, images, letters; and the difference between a primary source (research objects), a secondary source (research outputs), and the

# WT3: Work package description

association between representations (surrogates) of the record and the records themselves. The ontology will also describe the kinds of relationship between these sources and their authors/creators such as 'describe', 'comment', 'related to'. This will enable scholars to use this ontology to identify and unite sources from across collections and to reconfigure the sources into personal collections depending upon the scholarly context in which they working.

Beyond the foundation ontology we will research and either create or adapt domain specific ontologies that reflect both the bibliographic and conceptual particularities of Medieval and 1st World War historians respectively. For example, the ontological framework for Medieval history is likely to include people, places, institutions (e.g. libraries, churches), and language. For the First World War, the domain ontology is likely to include people, events, places, and language. Of particular importance will be to model the temporal aspects of both periods to reflect both synchronic and diachronic perspectives. The exact nature and form of the Ontologies will be determined and developed in close collaboration with the researchers and archives in the CENDARI partnership.

KCL will lead the work package and provide overall management and coordination of the work. KCL will lead the Ontology work and will contribute to the metadata and standards work. FUB, SIS and KCL will research the nature and content of the finding aids, archival records, and digitised data to identify the key elements and the synchronic and diachronic perspectives to be modelled in the domain Ontologies. KCL, EL and CERL will undertake research into existing Ontologies and the structure and form of the CENDARI Ontologies, developing the framework, the set of Ontologies, and the guidelines. EL, NKP, INRIA and UGOE will research the current metadata standards used by the archives and collection owners and develop the metadata schema and guidelines. In particular NKP will provide an archival perspective on the work to ensure that the metadata and Ontologies framework fits with archival standards, and INRIA will ensure that the outputs are properly integrated into the Research Spaces developed by WP10 for CENDARI. MISANU will contribute to both the metadata and Ontology research, in particular the guidelines on building Ontologies and publishing of Ontologies. Close collaboration will take place to cross reference usage and functional input for the Ontology toolkit, as well as the CENDARI repository where the Ontologies and metadata schema will be managed and persistently stored.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
2	FUB	15.00
3	MISANU	12.00
5	KCL	66.00
6	UGOE	12.00
7	NKP	17.00
8	SIS	15.00
11	INRIA	3.00
13	EL	20.00
	Total	160.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D6.1	Common metadata schema	13	16.00	O	PU	18
D6.2	Guidelines for applying the schema	13	8.00	O	PU	18

# WT3: Work package description

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D6.3	Guidelines for Ontology building	5	12.00	O	PU	24
D6.4	Publish Ontologies	5	86.00	O	PU	42
Total			122.00			

## Description of deliverables

D6.1) Common metadata schema: Metadata scheme for the portal site, based on research into existing standards and close consultation with the archives and collections owners. This will include work on crosswalks across different standards where appropriate. [month 18]

D6.2) Guidelines for applying the schema: Guidelines for the application of the metadata schema and standards to accompany the metadata tools to be provided by WP 7 [month 18]

D6.3) Guidelines for Ontology building: A review of methodologies for building Ontologies, assessment of applicability for CENDARI, development of guidelines for how CENDARI will build its set of Ontologies. This will include investigation of current practices, methods, approaches and tools in knowledge organisation/ontological modelling. [month 24]

D6.4) Publish Ontologies: This work will include consultation with researchers, archives, and other collections holders to construct the archive and domain Ontologies using the guidelines, and existing Ontologies where possible. We will initially focus on modelling the broad research areas defined in WP5 "Investigation and Description of Archives" and in extensive consultation with the research and archive partners in the project. The Ontologies will be created in iterative cycles that will involve close collaboration between the three main CENDARI partner groups: e-science/knowledge organisation specialist, historians, and archivists. [month 42]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS4	Guide framework established	2	9	Format signed off by technical and historian/archival participants
MS5	Metadata scheme defined	5	12	Agreement among WPs communicated to coordinator and technical leaders
MS6	Ontologies defined	5	12	Agreement among WPs communicated to coordinator and technical leaders
MS10	Beta release portal and VRE	3	22	VRE and Portal available for use in training events and specific user feedback workshops starting in month 16

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP7	Type of activity <sup>54</sup>	RTD
Work package title	Data Integration and Semantic Services		
Start month	1		
End month	48		
Lead beneficiary number <sup>55</sup>	3		

## Objectives

- to develop semantic tools and services for describing and integrating archives
- to deploy the CENDARI ontologies for use across archives
- to integrate heterogeneous external, multilingual content from CENDARI archives and the content produced within CENDARI in a standards-based and structured manner
- to populate the CENDARI repository
- to capture and respond to feedback on developed tools by close liaison with the researchers
- to ensure conformance of the tools developed with the metadata format, CENDARI model and architecture.

## Description of work and role of partners

The following activities will be undertaken in WP 8:

1. Development of four key components of the CENDARI infrastructure:
  - a) Archival Description Toolkit
  - b) Ontology Toolkit
  - c) Data Integration Toolkit
  - d) CENDARI repository
2. Integration of the data from participating archives using data integration toolkit.
3. Development of provenance model

Development of Archival Description Toolkit: The Archival Description Toolkit will support the creation and enrichment of archival descriptions and research guides in WP5. These will be structured digital resources that provide detailed information about the participating archives and their collections. Specific tasks included in this activity:

- specification of requirements for the toolkit (NKP, FEF)
- design and implementation of toolkit, including core components, service interfaces and user interfaces (NKP, MISANU)
- testing and documentation of the toolkit (NKP, MISANU)
- producing successive releases of the toolkit that incorporate further functionality and take into account feedback from users in WP4 (MISANU).

Development of Ontology Toolkit: The Ontology Toolkit will support the building and management of ontologies for describing the CENDARI data sources. Specific tasks included in this activity:

- evaluation of existing ontology editing tools and approaches (KCL, MISANU)
- specification of requirements for toolkit (KCL, MISANU)
- design, implementation, testing and documentation of toolkit (KCL, MISANU)
- producing successive releases of the toolkit that incorporate further functionality and take into account feedback from users in WP8 (MISANU).

Development of Data Integration Toolkit: The Data Integration Toolkit will support the creation of rich, semantic descriptions of the content of digital archives and mapping of the metadata from local archive formats, into the CENDARI metadata format. The toolkit will additionally include Natural Language Processing (NLP) functionality for entity recognition, extraction and disambiguation within the content. This information will be highly heterogeneous, and participating archives will exhibit different levels of expertise and variety of supported

# WT3: Work package description

protocols for data harvesting therefore developing this toolkit represents a substantial design and development effort. Specific tasks included in this activity:

- Data acquisition
  - o analysis of interfaces, formats and content structure provided by participating archives and definition of the mappings to CENDARI metadata format (FEF, INRIA, NKP)
  - o implementation of harvesting and transformation components to create CENDARI data (INRIA, MISANU)
- NLP technologies
  - o specification of the entity recognition and extraction rules (TCD, KCL, MISANU)
  - o design and implementation of the NLP components (TCD)
- Semantic description and interlinking of content: specification, design and implementation of components (KCL, INRIA, MISANU)
- Toolkit assembly and user interface implementation (MISANU, KCL, TCD)

Development of CENDARI Repository: The repository will be used to manage the CENDARI resources and other information, including that produced by the three toolkits, and potentially by other agents and tools.

Specific tasks included in this activity:

- evaluation of repository technologies and approaches (MISANU, KCL)
- information modelling and repository design (MISANU, KCL)
- implementation of the repository (MISANU, KCL)
- integration of the toolkits with the repository (MISANU, KCL)
- integration of the repository with the research spaces from WP9 (MISANU, INRIA)

Integration of Data from Participating Archives: In parallel with the development of the Data Integration Toolkit, researchers and archivists will use the toolkit to carry out the actual integration of the archival content, in the process populating the repository with the resources created. Tool development and data integration will occur in parallel and in close liaison, so that feedback from users feeds into development and ensures that the tooling matches closely the end users' requirements and practices. Thus the tools are validated and enhanced continually throughout the project lifetime, following an iterative development model.

Specific tasks included in this activity (all FEF):

- Creation and enhancement of semantic descriptions of archival content, using the CENDARI ontologies and the Data Integration Toolkit.
- Using the NLP functionality to identify and mark up named entities in archival content.
- Transforming metadata from local archive formats into the CENDARI metadata format.
- Ingestion of semantic descriptions and other resources into the repository.
- Evaluation of successive releases of the Data Integration Toolkit and the ontologies.
- Provision of feedback to development team on successive releases of toolkit, and to WP8 on successive releases of the ontologies.

In addition, NKP will bring substantial data in to the infrastructure via a technical reorganisation of the Manuscriptorium project (only possible via a subcontract through their exclusive technical provider).

Definition of Provenance Model: The provenance model for data and archives will allow us to record and interpret the history of the data as it is transformed and manipulated, and thus ensure researchers' trust in the CENDARI data and research environment.

Specific tasks included in this activity (all KCL):

- Evaluation of potential provenance approaches/models in relation to data and archives.
- Providing recommendations for an appropriate provenance model.
- Liaison with WP8 on the systems issues related to provenance.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	TCD	18.00
3	MISANU	85.00



# WT3: Work package description

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
5	KCL	34.00
7	NKP	12.00
9	FEF	15.00
11	INRIA	15.00
Total		179.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D7.1	Archival description toolkit (first stable release)	7	30.00	P	PP	12
D7.2	Data integration toolkit and repository (first stable release)	5	42.00	P	PP	24
D7.3	Ontology toolkit (first stable release)	5	35.00	P	PP	18
D7.4	Final releases of toolkits	3	63.00	O	PU	48
Total			170.00			

## Description of deliverables

D7.1) Archival description toolkit (first stable release): A toolkit that allows researchers investigating “hidden” archives (see WP5 “Investigation and Description of Archives”) to gather the required information in a structured way, to store this information locally, and to periodically upload it into the CENDARI repository for further processing. This deliverable also includes a report on representing and capturing provenance within CENDARI, focusing on the data/archive aspects. [month 12]

D7.2) Data integration toolkit and repository (first stable release): A toolkit that supports the semi-automated “mapping” of (digital) information from archives into the CENDARI data model. This includes: natural language processing components for extracting key entities from text-based resources and by proposing links both to other entities; metadata mappings between formats used in the archives and the internal CENDARI format; the repository instance for managing research guides, archive descriptions, ontologies, metadata and the semantic material created by CENDARI. [month 24]

D7.3) Ontology toolkit (first stable release): A toolkit that allows researchers and archivists to contribute to the initial construction, and future expansion, of the CENDARI ontologies, as well as to facilitate the linkage of those ontologies to the CENDARI data infrastructure. [month 18]

D7.4) Final releases of toolkits: The final, improved and enhanced, versions of the various toolkits released at the end of the project. [month 48]

# WT3: Work package description

Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS4	Guide framework established	2	9	Format signed off by technical and historian/archival participants
MS5	Metadata scheme defined	5	12	Agreement among WPs communicated to coordinator and technical leaders
MS7	Tool prototypes complete	3	12	For use in training and user feedback workshops from month 13
MS10	Beta release portal and VRE	3	22	VRE and Portal available for use in training events and specific user feedback workshops starting in month 16
MS12	Handover	1	48	For agreement by partners and with DARIAH

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP8	Type of activity <sup>54</sup>	RTD
Work package title	Research Processes and System Architecture		
Start month	1		
End month	48		
Lead beneficiary number <sup>55</sup>	6		

## Objectives

to create functional specifications from the usage scenarios created in WP3  
to define the overall CENDARI system architecture, to be realised by WP8 (backend) and WP10 (frontend)  
to develop functional specifications to inform the work of WP10 using the outputs of the workshops in WP3  
to work with users to test the CENDARI tools and services

## Description of work and role of partners

This WP translates between the user perspective captured in WP4 and the technical infrastructure, and aims to integrate the various internal and external factors that may influence the technical and operational infrastructure. This includes translating the user case studies and requirements (WP4) into functional requirements and architectural models, linking infrastructure-oriented and user-oriented development of the CENDARI technical environment.

WP9 operates on both a generic level modelling user requirements and the overall system architecture, as well as specifically on the three areas in CENDARI:

- A collaborative research environment for lifecycle processes, including a model for representing the processes of data selection, transformation and integration by researchers, and services for recording these processes. (moderated by KCL)
- A faceted browsing environment to allow researchers to explore CENDARI content and to make new connections between the integrated content. (moderated by UGOE)
- Tools for visualization, including geo-temporal and network visualisations thus enabling new forms of analysis and new insights into data and research questions. (moderated by INRIA)

To achieve its goals, research partners (UBH, NKP, SIS) have key roles in WP8 to ensure a usage-driven design of the CENDARI infrastructure.

Modelling work involves feedback loops between the various perspectives and activities until convergence towards shared concepts can be achieved. The workpackage will therefore host two workshops to progress the development of CENDARI. The first will be a mockup workshop. This workshop will allow users a preview into the future functionalities of the CENDARI environment. This offers the project an opportunity to test its approaches, and offers users an opportunity to feedback early in the design phase. The second will be a Test Workshop. With the availability of an alpha release of the CENDARI software, refining the usability and stability becomes increasingly important. The test workshop offers an opportunity to test the systems together with users in real situations.

The outputs of WP8 will guide the overall technical developments in CENDARI, and will consequently also impact on organisational and operational aspects in CENDARI and at partner sites. UGOE leads the WP8 and moderates overall functional modelling and architecture development. UGOE is the overall moderator of the portal development in the area "faceted browsing environment".

INRIA is the overall moderator of the area "visualisation", and they contribute the functional specification and prototyping for this area in WP8. Being the leader of the frontend system implementation in WP9, they also moderate the test workshop.

# WT3: Work package description

KCL is the overall moderator of the area "collaborative research environment", and they contribute the functional specification and prototyping for this area in WP8. Also, being the leader of WP6, KCL establishes the link to the semantic data models and ontology aspects.

UOB provides the domain input and connects to the researchers and archivists. They will assist in organisation and running of the workshops linking the user perspective into the functional descriptions, documentation, as well as the workshop. As a key partner from the user perspective, SIS will help to ensure the adequacy of the technical works and lead the documentation of all the tools. For the latter it is particularly important that somebody that speaks the same language as the researchers also moderates the documentation work.

NKP is the key archive partner in WP8 with relevant technical expertise, and therefore is an ideal link between archives and the technical infrastructure. They contribute significantly to the functional design from an archive perspective.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
4	UOB	6.00
5	KCL	12.00
6	UGOE	55.00
7	NKP	14.00
8	SIS	6.00
11	INRIA	16.00
Total		109.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D8.1	Functional Description, portal and VRE	8	8.00	O	PP	8
D8.2	Functional Description: visualisation	6	12.00	R	PP	12
D8.3	Architecture description (portal, VRE, visualisation)	11	6.00	P	PP	12
D8.4	Model for representing provenance of transformation and integration processes	7	5.00	R	PP	28
D8.5	Documentation of tools	6	24.00	R	PU	45
Total			55.00			

## Description of deliverables

D8.1) Functional Description, portal and VRE: The "functional description" will provide a user-oriented perspective on the goals of both the portal and the VRE. The main goals of this activity are (1) to model user requirements for the portal and the VRE, (2) to link them to the research processes to be identified in WP4, and (3) align the findings with the technical infrastructure. [month 8]

# WT3: Work package description

D8.2) Functional Description: visualisation: The pillar "visualisation" will build on the available data on one side and available visualisation methods on the other. Despite this focus on available methods and algorithms, this task will ensure the close interaction with user requirements and ensure the adequacy in terms of their research value. [month 12]

D8.3) Architecture description (portal, VRE, visualisation): Architecture planning in CENDARI will have to integrate different factors: (1) the functional descriptions, (2) the existing information systems at the archives and research institutions at the CENDARI target community, as well as (3) the technical infrastructure as available through DARIAH and affiliated projects like EHRI. [month 12]

D8.4) Model for representing provenance of transformation and integration processes: Provenance documents the authenticity of research data, and is therefore a key factor for trust in the research data and the research environment. Since provenance stretches across both data/ontologies as well as systems, the analysis to be conducted in this deliverable builds strongly on the situation at archives (cf. survey in WP6 and WP7). Moreover, provenance cannot be tackled by one community alone and the expertise and developments of international infrastructures will be evaluated in this report, including DARIAH as well as international activities like the Digital Author Identifier. [month 28]

D8.5) Documentation of tools: Documentation of tools contributes to the overall usability of the research environment and needs to be conducted in tight cooperation between researchers and infrastructure experts. [month 45]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS3	User requirements defined	4	6	This refers to the assessment by the methodological experts of what the user requirements are, and the ability of the technical team to translate them from that level of specificity into delivery
MS7	Tool prototypes complete	3	12	For use in training and user feedback workshops from month 13
MS9	First formal feedback loop completed	6	18	Due to the iterative nature of agile development, this first loop will prove both the method and the progress rate of CENDARI development
MS10	Beta release portal and VRE	3	22	VRE and Portal available for use in training events and specific user feedback workshops starting in month 16

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP9	Type of activity <sup>54</sup>	RTD
Work package title	Research Spaces		
Start month	1		
End month	48		
Lead beneficiary number <sup>55</sup>	11		

## Objectives

- to develop a portal that allows integrated discovery of and access to resources held in the participating archives and other web-accessible resources, in coherence with the architecture and functional specifications defined in WP9
- to develop functionalities that allows integrated discovery of and access to resources held in the participating archives and other web-accessible resources
- to develop an enquiry environment that (i) provides shared access to tools for integrating and processing data; (ii) provides a collaborative space for sharing and discussion; (iii) supports the research lifecycle of the targeted communities
- to develop visualisation tools and services to ensure that available information can be maximally exploited by researchers according to his/her research interests

## Description of work and role of partners

This WP will be responsible for the development of the CENDARI research space by integrating a range of different tools and resources into a modular, web-based research environment. The WP builds upon the work of DARIAH, (i) by following its policies to ensure interoperability, and (ii) by implementing core infrastructural services (e.g. persistent identifiers, authentication/authorisation) based on existing DARIAH services.

The development will be based upon two complementary tasks:

- implementing a portal to search, browse and (read) access to resources held by participating archives and integrated by WP7 "Data Integration and Semantic Services" to researchers and the general public (moderated by UGOE)
- implementing a virtual research environment (VRE) that provides researchers with appropriate authorisation with facilities to analyse, manipulate and visualise data resources (Moderated by INRIA)

The portal and VRE will support not only access to the individual archives, but also the ability to explore the integrated holdings of these distributed archives, as well as the material produced by CENDARI itself, such as the Registry of Archives, via a faceted browsing interface (resp. UGOE) driven by the ontology and data integration work developed in WP6 and 7. This portal will be made available as a free service with open access for users.

With regard to user-oriented interfaces, the partners combine experiences in the creation of various tools for research, such as faceted browsing. Faceted browsing allows user to navigate data structures through several of their dimensions. Moreover, this browsing will be available in multiple languages. For example, time-related information can be visualized on a time-line, geographical information can be visualized in space and social network information can be explored using network visualization. These exploration facets can also be combined in several ways: by juxtaposing several facets and linking them (e.g. selecting an item in the time-line view also highlights it in the space-view) or by deeply merging visualizations, with flow maps or more complex visualizations. In either of these modes, a user will be able to toggle between the original language and a translation.

To maximise the correspondence between the researchers' requirements and the functionality of the resulting environment, we will follow an agile development approach, involving researcher-driven, incremental cycles of implementation and evaluation in collaboration with the researchers and other stakeholders. These iterations

# WT3: Work package description

will involve close liaison with WP 8, which will both drive the functionality of the environment and evaluate its successive releases.

Interaction will also be built with WP7 ("Data Integration and Semantic Services") to ensure a consistent architecture building on shared infrastructure components to be adapted and extended from the DARIAH infrastructure, including persistent identifiers (PIDs) - for linking across heterogeneous data types, and authentication/authorisation (AAI) - for authenticating users and enabling rights management (e.g. users can choose who has access to their collections and annotations).

## Partner Roles

INRIA will lead this development with support on the user needs and ontological implementation from UGOE and KCL respectively. INRIA will also be in charge of the development of the visualization tools

UGOE will develop of the faceted browsing portal, and establish the software development environment that treats all CENDARI developers to a shared work environment (including a code repository and ticketing system).

KCL will create the framework necessary to apply the ontologies within the search, browse and analysis functions, and contribute to the development of the VRE

SANU will ensure the development harmonizes with the technical backend

UOB and FEF will provide further user input at each development stage and insure maximal relevance and usability of the portal and VRE.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
3	MISANU	18.00
4	UOB	12.00
5	KCL	12.00
6	UGOE	18.00
9	FEF	12.00
11	INRIA	45.00
Total		117.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D9.1	Prototype for search and faceted search tools	6	12.00	P	PP	12
D9.2	Full Release Portal/VRE	11	36.00	O	PU	36
D9.3	Overview of Current Use at Partner Archives	11	36.00	R	PU	45
Total			84.00			

## Description of deliverables

D9.1) Prototype for search and faceted search tools: To be created using data samples that showcase results by the data integration (WP8) [provide technology evaluation and implementation; deliverable shared with WP8] [month 12]

D9.2) Full Release Portal/VRE: This release should bring together all elements of the CENDARI development, adding full connectivity through the layer developed by WP 7. [month 36]

# WT3: Work package description

D9.3) Overview of Current Use at Partner Archives: To include code documentation for reuse of tools for other communities [month 45]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS7	Tool prototypes complete	3	12	For use in training and user feedback workshops from month 13
MS10	Beta release portal and VRE	3	22	VRE and Portal available for use in training events and specific user feedback workshops starting in month 16



# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP10	Type of activity <sup>54</sup>	SUPP
Work package title	Transnational Access: Czech National Library		
Start month	12		
End month	48		
Lead beneficiary number <sup>55</sup>	7		

## Objectives

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## Description of work and role of partners

Description of the infrastructure  
 Name of the infrastructure: National Library of the Czech Republic/Manuscriptorium  
 Location (town, country): Prague  
 Web site address: <http://www.manuscriptorium.com>; <http://www.manuscriptorium.eu>;  
<http://www.manuscriptorium.cz>  
 Legal name of organisation operating the infrastructure: National Library of the Czech Republic  
 Location of organisation (town, country): Prague  
 Annual operating costs (excl. investment costs) of the infrastructure: The annual operating costs of providing access to the library, reading room and digital infrastructure of the Czech National Library are entirely interwoven with the general access and service provided to researchers and the general public, and therefore very difficult to isolate from the general annual operational costs of the institution.

Description of the infrastructure: National Library of the Czech Republic offers access to its infrastructure for presenting written and cultural heritage, especially to manuscript infrastructure which is Manuscriptorium. Manuscriptorium is an aggregated digital manuscript library containing ca. 250 000 catalogue records, ca. 40 000 fully digitized documents, ca. 36 000 full texts. It aggregates materials from more than 20 European countries.

Services currently offered by the infrastructure: National Library of the Czech Republic supports through Manuscriptorium digital library both easy and advanced search as well as to refine or expand results and also to exclude from results and other sophisticated utilities. It supports to create an individual account that enables to create end user's own virtual collection (static and dynamic as well) and/or his/her own virtual document. Content of each individual account can be shared (i.e. it enables cooperative research). Participants availing of the transnational access under CENDARI will in addition have access to the analogue collections of the library, the reading room and the expertise of the library staff.

Modality of access under this proposal: Access will be offered to six researchers for between 6 and 10 weeks. The consortium will not claim costs for the transnational access of users at the NKP library and reading room. NKP will offer this access at zero unit cost. As explained above the annual operational costs of the library are interwoven and therefore very difficult to isolate from the general costs of the NKP as an institution. The budget for transnational access is therefore made up of the costs for the travel and subsistence of the users and the costs of the review procedure.

Outreach of new users: An international call for proposals will be held, see WP 3 for a description of this process. Manuscriptorium is open to the European and to the global research (according to statistics it is accessed from ca. 80 countries worldwide).

Review procedure under this proposal: See WP 3.

The unit of access is one week (5 consecutive days) and the minimum quantity of access provided will be 6 weeks.

# WT3: Work package description

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
7	NKP	0.00
	Total	0.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D10.1	Delivery of Transnational Access, NKP	7	0.00	O	PU	48
		Total	0.00			

## Description of deliverables

D10.1) Delivery of Transnational Access, NKP: Hosting of not less than 6 researchers for an average of 13 weeks each (total access 78 weeks over the life of the grant) [month 48]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS8	First funding call released	1	13	The release of this critical first call will require both the recruitment and evaluation procedures to have been agreed by all partners

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP11	Type of activity <sup>54</sup>	SUPP
Work package title	Transnational Access: University of Stuttgart and Bibliothek fuer Zeitgeschichte		
Start month	12		
End month	48		
Lead beneficiary number <sup>55</sup>	10		

## Objectives

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## Description of work and role of partners

Name of the infrastructure: University of Stuttgart/Bibliothek fuer Zeitgeschichte

Location: Stuttgart/Germany

Website address: <http://www.wlb-stuttgart.de/sammlungen/bibliothek-fuer-zeitgeschichte>

Legal name of the organisation operating the infrastructure: Ministerium fuer Wissenschaft, Forschung und Kunst, Baden-Wuerttemberg

Location of the organisation: Konrad-Adenauer-Strasse 8

D-70173 Stuttgart

Tel: +49-711-212-4516

Fax: +\_49-711-212-4517

e-mail: [bfz@wlb-stuttgart.de](mailto:bfz@wlb-stuttgart.de)

The University will manage the transnational access to collections held by the entity which oversees their operation, the State of Baden-Wuerttemberg Ministry for Science, Research and Arts. Of particular interest in this respect will be the collections of the Wuerttembergische Landesbibliothek, and more specifically still the Bibliothek fuer Zeitgeschichte, which has substantial important holdings for the study of the First World War.

Annual operating costs of the infrastructure: The annual operating costs of providing access to the library, reading room and digital infrastructure of the Bibliothek fuer Zeitgeschichte are entirely interwoven with the general access and service provided to researchers and the general public by the Wuerttemberg State Library, and therefore very difficult to isolate from the general annual operating costs of the institution.

Description of the infrastructure: The Bibliothek fuer Zeitgeschichte - BfZ (Library of Contemporary History) is one of Germany's leading research libraries for 20th century history and politics, specialising among others in the history of both world wars. Being part of the Wuerttemberg State Library, the BfZ collection currently holds approx. 380,000 books and 450 periodicals. Besides, the BfZ comprises a great number of archival collections relating inter alia to the war of 1914-1918; an extensive photographic collection with approx. 30,000 amateur and professional photographs, numerous political and military (wall) posters and pamphlets including leaflets dropped from airplanes during the war and a map collection that holds more than 7,000 topographic and military maps with an emphasis on the western front line. Unique in its size is a collection of letters, postcards and other autobiographical material (also private war diaries) containing at present more than 125,000 letters to and from the fronts from both world wars. This collection of war-related Ego-documents is now one of the most sought-after archival collections for the new cultural interpretation (Kulturgeschichte) of the Great War.

Services currently offered by the infrastructure: During the last two decades the BfZ has developed into an internationally renowned research centre for World War 1 studies, not least due to the number and quality of its scholarly publications (see the series 'Schriften der Bibliothek fuer Zeitgeschichte' since 1993, published by Klartext Verlag, Essen, as well as the international First World War Encyclopedia edited by Gerhard Hirschfeld, Gerd Krumreich and Irina Renz, 2003, 3rd revised edition 2009, to which 146 scholars from 15 countries have contributed, English language edition forthcoming). A contributory factor has been a series of scholarly projects, conferences, workshops and exhibitions as well as regular public lectures and debates relating to the First World War which have been initiated and organised by the BfZ.

# WT3: Work package description

Modality of access under this proposal: Access will be offered to six researchers for between 6 and 10 weeks. The consortium will not claim costs for the transnational access of users at the BfZ library and reading room. The BfZ will offer this access at zero unit cost. As explained above the annual operational costs of the library are interwoven and therefore very difficult to isolate from the general costs of the WLB as an institution. The budget for transnational access is therefore made up of the costs for the travel and subsistence of the users and the costs of the review procedure. Participants availing of the transnational access funding at the BfZ will have access to the full collections described above as well as reading room and expert services of the library staff.

Outreach of new users: An international call for proposals will be held, see WP 3 for a description of this process.

Review procedure under this proposal: See WP 3.

The unit of access is one week (5 consecutive days) and the minimum quantity of access provided will be 6 weeks.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
10	USTUTT	0.00
	Total	0.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D11.1	Delivery of Transnational Access, BfZ	10	0.00	O	PU	48
		Total	0.00			

## Description of deliverables

D11.1) Delivery of Transnational Access, BfZ: Hosting of not less than 6 researchers for an average of 13 weeks each (total access 78 weeks over the life of the grant) [month 48]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS8	First funding call released	1	13	The release of this critical first call will require both the recruitment and evaluation procedures to have been agreed by all partners

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP12	Type of activity <sup>54</sup>	SUPP
Work package title	Transnational Access: Trinity College Dublin		
Start month	12		
End month	48		
Lead beneficiary number <sup>55</sup>	1		

## Objectives

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## Description of work and role of partners

Trans-national Access: Trinity College Dublin

Name of the Infrastructure: Trinity Long Room Hub

Location: Dublin

Website address: <http://www.tcd.ie/longroomhub>

Legal name of the organisation operating the infrastructure: The Provost, Fellows, Foundation Scholars and other Members of the Board of the College of the Holy and Undivided Trinity of Queen Elizabeth Near Dublin

Location of the organisation: Dublin

Annual operating costs of the infrastructure: the annual operating costs of providing access to the library, the archives, and the institute are entirely interwoven with the general budget of the institution's research and teaching missions, and therefore very impossible to isolate from the general annual operating costs of the institution.

Description of the infrastructure: The Trinity Long Room Hub is a research institute for arts and humanities located at Trinity College Dublin. The institute was founded in 2006 and inaugurated its 1000m2 purpose-built facility in 2010. The Long Room Hub facilitates interdisciplinary discourse across its member Schools and the Library through support for projects, events and people, in particular our Visiting Research Fellows. As such, it brings together the disparate areas of excellence across the university and beyond, including in the areas of medieval history, history of the First World War and Digital Humanities, all of which are represented in College by active Research Centres and Programmes. Furthermore, the Hub works closely with the Trinity College Library, which holds a wealth of collections from famous medieval manuscripts such as the Book of Kells to significant holdings regarding the Irish role in the Great War. The Library's Digital Resources Unit has been working since 2005 to bring these riches into an accessible format, launching its on-line collections in 2011.

One of the most active programmes of the Long Room Hub is its research fellow programme, which welcomes researchers to come and work alongside its own staff, collections and staff in the wider Schools. TCD has wide ranging expertise in the creation, use, analysis and interpretation of digital source materials, and the application of ICT methods to digital content. These include methods such as text editing, data mining, natural language processing and 2D and 3D visualisations, and the tools that support the application of these methods. The Hub hosts a PhD in Digital Arts and Humanities and contributes to an MPhil in Digital Culture and Humanities.

Services offered by the infrastructure:

Fellows in the Long Room Hub receive the use of an office with phone and computer in historic Fellow's Square, and access to all TCD facilities, including all Library and Archive services across the modern and early collections (stack ordering, reading room access for sensitive materials and book check-out, librarian expertise, etc) and the Senior Common Room. They also receive access to affordable, short term accommodation in Dublin, subsidised by the Institute. The Hub will also bring the Fellows into close working relationships with the collected scholars of the Trinity Digital Forum (roughly 60 across the disciplines) who offer its expertise to

# WT3: Work package description

support researchers who wish to apply digital humanities methods and techniques to their data and to the data integrated through CENDARI. This will enable researchers to fully exploit the digital content, research guides and archive directory provided by CENDARI to ask new research questions. Researchers will also be invited to attend or give seminars and lectures as appropriate to their research interests.

Modality of access under this proposal:

Access will be offered to six researchers for between 8 and 12 weeks. Researchers will have access to research expertise and relevant collections for their research and may bring their own collections as well.

Outreach of new users: The call will be announced on the CENDARI website and on the website of the participating institution. Details will also be circulated to appropriate mailing lists, professional societies, special interest groups, and conferences. It will also be featured in the annual call for Long Room Hub Fellows, which last year received over 200 applications from around the world.

Review procedure under this proposal: See under WP 3

Unit of access: The unit of access is one week i.e. five working days.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
1	TCD	0.00
	Total	0.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D12.1	Delivery of Transnational Access, TCD	1	0.00	O	PU	48
		Total	0.00			

## Description of deliverables

D12.1) Delivery of Transnational Access, TCD: Hosting of not less than 6 researchers for an average of 13 weeks each (total access 78 weeks over the life of the grant) [month 48]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS8	First funding call released	1	13	The release of this critical first call will require both the recruitment and evaluation procedures to have been agreed by all partners

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP13	Type of activity <sup>54</sup>	SUPP
Work package title	Transnational Access: Kings College London		
Start month	12		
End month	48		
Lead beneficiary number <sup>55</sup>	5		

## Objectives

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## Description of work and role of partners

Trans-national Access: King's College London

Name of the Infrastructure: Department of Digital Humanities, King's College London

Location: London

Website address: <http://www.kcl.ac.uk/innovation/groups/cerch/index.aspx>;

Legal name of the organisation operating the infrastructure: King's College London

Location of the organisation: London

Annual operating costs of the infrastructure: the annual operating costs of providing access to the library, the archives, and the department are entirely interwoven with the general services provided to researchers, students and the public, and therefore very difficult to isolate from the general annual operating costs of the institution.

Description of the infrastructure: The Department of Digital Humanities (in which the Centre for e-Research is located) has a long standing reputation as one of the foremost centres of expertise in the digital humanities and the application of ICT methods for digital scholarship in the world. The Department has an active research and teaching programme, a vibrant seminar programme, and collaborates closely with colleagues across the Schools of Arts and Humanities and Social Sciences who bring in expertise in medieval and 1st World War studies. King's College is renowned for its historians and has with the Department of War Studies one of the world's premier centres of expertise in 1st World War studies and there are numerous collaborations between these departments and the Department of Digital Humanities. Furthermore, the Department works closely with King's College Archives, especially in the field of digital collections. King's Archives hold many relevant collections and have recently digitised the Serving Soldier collections from the Liddell Hart Centre for Military Archives, which contains 800 collections of material created by senior defence personnel throughout the twentieth century. The Department itself holds numerous historical collections as part of its digitisation partnerships with department across the UK, from Europe and Canada.

The Department operates an active research fellow programme and welcomes researchers to come and work alongside its own staff, and staff in the wider department and School. The Centre and Department of Digital Humanities have wide ranging expertise in the creation, use, analysis and interpretation of digital source materials, and the application of ICT methods to digital content. These include methods such as text mining, spatial analysis, network analysis, prosopography, and 2D and 3D visualisations, and the tools that support the application of these methods. The Department teaches an MA in Digital Asset Management and an MA in Digital Humanities.

Services offered by the infrastructure:

The Department will offer its expertise to support researchers who wish to apply digital humanities methods and techniques to their data and to the data integrated through CENDARI. This will enable researchers to fully exploit the digital content, research guides and archive directory provided by CENDARI to ask new research questions. Researchers will be offered a desk and access to a computer, to the tools that support research

# WT3: Work package description

work in the digital humanities, and will have full access the library and the archives at KCL, and the University of London library at Senate House. The Department will appoint a contact person who will be available for questions and consultation during office hours. Researchers will be supported to engage with other scholars across all departments, to attend seminars and lectures, and to attend classes from the MA programmes that may be appropriate to their research interests.

Modality of access under this proposal:

Access will be offered to six researchers for between 8 and 12 weeks. The Department has highly specialised staff with specific expertise in dealing with digital materials and applying digital methods to their research who will support the researchers during their stay. Researchers will have access to relevant collections for their research and may bring their own collections.

Outreach of new users: The call will be announced on the CENDARI website and on the website of the participating institution. Details will also be circulated to appropriate mailing lists, professional societies, special interest groups, and conferences. The Department is an active member of relevant Digital Humanities organisations including the Alliance of Digital Humanities Organisations, the Association of Literary and Linguistic Computing, and the Association of History and Computing. The Department also runs the largest worldwide distribution list for Digital Humanities: Humanist.

Review procedure under this proposal: See WP 3.

The unit of access is one week (5 consecutive days) and the minimum quantity of access provided will be 6 weeks.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
5	KCL	0.00
	Total	0.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D13.1	Delivery of Transnational Access, KCL	5	0.00	O	PU	48
	Total		0.00			

## Description of deliverables

D13.1) Delivery of Transnational Access, KCL: Hosting of not less than 6 researchers for an average of 13 weeks each (total access 78 weeks over the life of the grant) [month 48]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS8	First funding call released	1	13	The release of this critical first call will require both the



# WT3: Work package description

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
				recruitment and evaluation procedures to have been agreed by all partners

# WT3: Work package description

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## One form per Work Package

Work package number <sup>53</sup>	WP14	Type of activity <sup>54</sup>	SUPP
Work package title	Transnational Access: University of Goettingen		
Start month	12		
End month	48		
Lead beneficiary number <sup>55</sup>	6		

## Objectives

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## Description of work and role of partners

Trans-national Access: University of Goettingen

Name of the Infrastructure: Goettingen Centre for Digital Humanities

Location: Goettingen

Website address: <http://www.GSDH.de>

Legal name of the organisation operating the infrastructure: Georg-August-Universitaet Goettingen Stiftung Oeffentlichen Rechts

Location of the organisation: Goettingen

Annual operating costs of the infrastructure: the annual operating costs of the University, the library, the archives, and the Centre are entirely interwoven with the general services provided to researchers, students and the public, and therefore very difficult to isolate from the general annual operating costs of the institution.

Description of the infrastructure:

The Göttingen Centre for Digital Humanities (GCDH) is a cross-faculty institution that is carried, in particular by the following institution: The Göttingen State and University Library, the Faculty of Law, the Faculty of Humanities (in a leading role), the Faculty of Social Sciences, the Faculty of Theology and the Faculty of Economic Sciences. GCDH is also closely cooperating with the following member institution of the larger Göttingen Research Campus: the Academy of Sciences and Humanities Göttingen, the Herzog August Bibliothek Wolfenbüttel and the Max Planck Society / Max Planck Digital Library. GCDH fulfills, in particular, the following tasks:

- Fulfillment of the duties and responsibilities of higher education in research, teaching, academic studies and continuing education in the field of Digital Humanities;
- Promotion of young academics;
- Promotion of teaching through support through the realization of a doctoral program in Digital Humanities;
- Promotion of the transfer of knowledge and scholarly communication through the planning and implementation of lecture series, symposia, colloquia, invited lectures, workshops and the setting of interdisciplinary themes;
- Procurement and joint support of third party funded research projects; Cooperation with national and international institutions;
- Coordination and support of university-external contacts with industry, economy and research facilities;
- Organization, coordination, implementation and support of interdisciplinary research projects in the field of Digital Humanities and their applications;
- Creation, maintenance and organization of Digital Humanities infrastructures;
- Creation, maintenance and organization of Digital Humanities services.

Services offered by the infrastructure:

The Centre will offer its expertise to support researchers who wish to apply digital humanities methods and techniques to their data and to the data integrated through CENDARI. This will enable researchers to fully exploit

# WT3: Work package description

the digital content, research guides and archive directory provided by CENDARI to ask new research questions. Researchers will be offered a desk and access to a computer, to the tools that support research work in the digital humanities. The Centre will appoint a contact person who will be available for questions and consultation during office hours. Researchers will be supported to engage with other scholars across all departments, and to attend seminars and lectures as may be appropriate to their research interests.

Modality of access under this proposal: Access will be offered to six researchers for between 8 and 12 weeks. Researchers will have access to research expertise and relevant available collections for their research and may bring their own collections as well.

Outreach of new users: The call will be announced on the CENDARI website and on the website of the participating institution. Details will also be circulated to appropriate mailing lists, professional societies, special interest groups, and conferences.

Review procedure under this proposal: See under WP 3

The unit of access is one week (5 consecutive days) and the minimum quantity of access provided will be 6 weeks.

## Person-Months per Participant

Participant number <sup>10</sup>	Participant short name <sup>11</sup>	Person-months per participant
6	UGOE	0.00
	Total	0.00

## List of deliverables

Deliverable Number <sup>61</sup>	Deliverable Title	Lead beneficiary number	Estimated indicative person-months	Nature <sup>62</sup>	Dissemination level <sup>63</sup>	Delivery date <sup>64</sup>
D14.1	Delivery of Transnational Access, UGOE	6	0.00	O	PU	48
		Total	0.00			

## Description of deliverables

D14.1) Delivery of Transnational Access, UGOE: Hosting of not less than 6 researchers for an average of 13 weeks each (total access 78 weeks over the life of the grant) [month 48]

## Schedule of relevant Milestones

Milestone number <sup>59</sup>	Milestone name	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS8	First funding call released	1	13	The release of this critical first call will require both the recruitment and evaluation procedures to have been agreed by all partners

# WT4: List of Milestones

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## List and Schedule of Milestones

Milestone number <sup>59</sup>	Milestone name	WP number <sup>53</sup>	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
MS1	Recruitment of External Expert Advisory Board	WP1, WP3	1	6	By this date a full slate of 10 nominated experts shall have been recruited, and a list of members can be made available through the CENDARI website
MS2	Archive directory complete	WP5	2	6	As a first phase of archival discovery, this listing will become the backbone for the future gathering of archival holding description
MS3	User requirements defined	WP4, WP8	4	6	This refers to the assessment by the methodological experts of what the user requirements are, and the ability of the technical team to translate them from that level of specificity into delivery
MS4	Guide framework established	WP5, WP6, WP7	2	9	Format signed off by technical and historian/archival participants
MS5	Metadata scheme defined	WP6, WP7	5	12	Agreement among WPs communicated to coordinator and technical leaders
MS6	Ontologies defined	WP5, WP6	5	12	Agreement among WPs communicated to coordinator and technical leaders
MS7	Tool prototypes complete	WP7, WP8, WP9	3	12	For use in training and user feedback workshops from month 13
MS8	First funding call released	WP3, WP10, WP11, WP12, WP13, WP14	1	13	The release of this critical first call will require both the recruitment and evaluation procedures to have been agreed by all partners
MS9	First formal feedback loop completed	WP3, WP4, WP8	6	18	Due to the iterative nature of agile development, this first loop will prove both the method and the

# WT4: List of Milestones

Milestone number <sup>59</sup>	Milestone name	WP number <sup>53</sup>	Lead beneficiary number	Delivery date from Annex I <sup>60</sup>	Comments
					progress rate of CENDARI development
MS10	Beta release portal and VRE	WP6, WP7, WP8, WP9	3	22	VRE and Portal available for use in training events and specific user feedback workshops starting in month 16
MS11	Business Plan	WP2	1	32	To be consulted and agreed by partners
MS12	Handover	WP1, WP2, WP7	1	48	For agreement by partners and with DARIAH

# WT5:

## Tentative schedule of Project Reviews

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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### Tentative schedule of Project Reviews

Review number <sup>65</sup>	Tentative timing	Planned venue of review	Comments, if any
RV 1	14	Florence	Basic structure (technical and managerial) established and tested
RV 2	26	Stuttgart	Clear progress toward final goals in terms of content and technical infrastructure
RV 3	38	London	All groundwork complete, consolidation phase clearly defined
RV 4	48	Brussels	End of project, all deliverables met

## Project Effort by Beneficiary and Work Package

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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### Indicative efforts (man-months) per Beneficiary per Work Package

Beneficiary number and short-name	WP 1	WP 2	WP 3	WP 4	WP 5	WP 6	WP 7	WP 8	WP 9	WP 10	WP 11	WP 12	WP 13	WP 14	Total per Beneficiary
1 - TCD	54.50	30.00	6.00	0.00	24.00	0.00	18.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	132.50
2 - FUB	0.00	0.00	0.00	10.00	67.00	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	92.00
3 - MISANU	0.00	0.00	0.00	0.00	0.00	12.00	85.00	0.00	18.00	0.00	0.00	0.00	0.00	0.00	115.00
4 - UOB	0.00	4.00	24.00	30.00	24.00	0.00	0.00	6.00	12.00	0.00	0.00	0.00	0.00	0.00	100.00
5 - KCL	4.00	0.00	0.00	0.00	0.00	66.00	34.00	12.00	12.00	0.00	0.00	0.00	0.00	0.00	128.00
6 - UGOE	0.00	0.00	0.00	7.00	0.00	12.00	0.00	55.00	18.00	0.00	0.00	0.00	0.00	0.00	92.00
7 - NKP	0.00	0.00	6.00	10.00	12.00	17.00	12.00	14.00	0.00	0.00	0.00	0.00	0.00	0.00	71.00
8 - SIS	3.00	0.00	0.00	24.00	0.00	15.00	0.00	6.00	0.00	0.00	0.00	0.00	0.00	0.00	48.00
9 - FEF	0.00	0.00	0.00	0.00	30.00	0.00	15.00	0.00	12.00	0.00	0.00	0.00	0.00	0.00	57.00
10 - USTUTT	3.00	0.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	12.00
11 - INRIA	0.00	4.00	0.00	0.00	0.00	3.00	15.00	16.00	45.00	0.00	0.00	0.00	0.00	0.00	83.00
12 - CERL	0.00	4.00	16.00	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	27.00
13 - EL	0.00	3.00	0.00	0.00	10.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	33.00
14 - UNICAS	0.00	0.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	30.00
<b>Total</b>	64.50	45.00	61.00	88.00	197.00	160.00	179.00	109.00	117.00	0.00	0.00	0.00	0.00	0.00	1,020.50

## Project Effort by Activity type per Beneficiary

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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### Indicative efforts per Activity Type per Beneficiary

Activity type	Part. 1 TCD	Part. 2 FUB	Part. 3 MISANU	Part. 4 UOB	Part. 5 KCL	Part. 6 UGOE	Part. 7 NKP	Part. 8 SIS	Part. 9 FEF	Part. 10 USTUTT	Part. 11 INRIA	Part. 12 CERL	Part. 13 EL	Part. 14 UNICAS	Total
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1. RTD/Innovation activities															
WP 6	0.00	15.00	12.00	0.00	66.00	12.00	17.00	15.00	0.00	0.00	3.00	0.00	20.00	0.00	160.00
WP 7	18.00	0.00	85.00	0.00	34.00	0.00	12.00	0.00	15.00	0.00	15.00	0.00	0.00	0.00	179.00
WP 8	0.00	0.00	0.00	6.00	12.00	55.00	14.00	6.00	0.00	0.00	16.00	0.00	0.00	0.00	109.00
WP 9	0.00	0.00	18.00	12.00	12.00	18.00	0.00	0.00	12.00	0.00	45.00	0.00	0.00	0.00	117.00
<b>Total Research</b>	<b>18.00</b>	<b>15.00</b>	<b>115.00</b>	<b>18.00</b>	<b>124.00</b>	<b>85.00</b>	<b>43.00</b>	<b>21.00</b>	<b>27.00</b>	<b>0.00</b>	<b>79.00</b>	<b>0.00</b>	<b>20.00</b>	<b>0.00</b>	<b>565.00</b>

2. Demonstration activities															
<b>Total Demo</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>

3. Consortium Management activities															
WP 1	54.50	0.00	0.00	0.00	4.00	0.00	0.00	3.00	0.00	3.00	0.00	0.00	0.00	0.00	64.50
<b>Total Management</b>	<b>54.50</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>4.00</b>	<b>0.00</b>	<b>0.00</b>	<b>3.00</b>	<b>0.00</b>	<b>3.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>64.50</b>

Work Packages for Coordination activities															
WP 2	30.00	0.00	0.00	4.00	0.00	0.00	0.00	0.00	0.00	0.00	4.00	4.00	3.00	0.00	45.00
WP 3	6.00	0.00	0.00	24.00	0.00	0.00	6.00	0.00	0.00	9.00	0.00	16.00	0.00	0.00	61.00
WP 4	0.00	10.00	0.00	30.00	0.00	7.00	10.00	24.00	0.00	0.00	0.00	7.00	0.00	0.00	88.00
WP 5	24.00	67.00	0.00	24.00	0.00	0.00	12.00	0.00	30.00	0.00	0.00	0.00	10.00	30.00	197.00
<b>Total Coordination</b>	<b>60.00</b>	<b>77.00</b>	<b>0.00</b>	<b>82.00</b>	<b>0.00</b>	<b>7.00</b>	<b>28.00</b>	<b>24.00</b>	<b>30.00</b>	<b>9.00</b>	<b>4.00</b>	<b>27.00</b>	<b>13.00</b>	<b>30.00</b>	<b>391.00</b>



## Project Effort by Activity type per Beneficiary

4. Other activities															
Total other	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Work Packages for Support activities															
WP 10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 11	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 12	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 13	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
WP 14	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total Support	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	132.50	92.00	115.00	100.00	128.00	92.00	71.00	48.00	57.00	12.00	83.00	27.00	33.00	30.00	1,020.50

# WT8: Project Effort and costs

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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## Project efforts and costs

Beneficiary number	Beneficiary short name	Estimated eligible costs (whole duration of the project)							Total receipts (€)	Requested EU contribution (€)
		Effort (PM)	Personnel costs (€)	Subcontracting (€)	Other Direct costs (€)	Indirect costs OR lump sum, flat-rate or scale-of-unit (€)	Access costs (€)	Total costs		
1	TCD	132.50	768,649.00	22,500.00	202,498.00	582,688.20	0.00	1,576,335.20	0.00	1,230,356.00
2	FUB	92.00	443,164.00	6,000.00	102,464.00	327,376.80	0.00	879,004.80	0.00	599,215.00
3	MISANU	115.00	238,760.00	0.00	29,120.00	160,728.00	0.00	428,608.00	0.00	321,456.00
4	UOB	100.00	539,100.00	8,400.00	23,972.00	337,843.20	0.00	909,315.20	0.00	623,497.00
5	KCL	128.00	724,071.00	0.00	135,180.00	515,550.60	0.00	1,374,801.60	0.00	1,033,188.00
6	UGOE	92.00	506,000.00	12,000.00	156,274.00	397,364.40	0.00	1,071,638.40	0.00	790,397.00
7	NKP	71.00	114,310.00	40,000.00	101,164.00	102,960.00	0.00	358,434.00	0.00	279,557.00
8	SIS	48.00	105,165.00	0.00	4,464.00	65,777.40	0.00	175,406.40	0.00	127,772.00
9	FEF	57.00	105,165.00	0.00	2,464.00	64,899.00	0.00	172,528.00	0.00	101,712.00
10	USTUTT	12.00	66,000.00	0.00	86,484.00	91,490.40	0.00	243,974.40	0.00	172,962.00
11	INRIA	83.00	487,127.00	0.00	24,640.00	407,779.00	0.00	919,546.00	0.00	682,432.00
12	CERL	27.00	251,640.00	0.00	4,275.00	51,183.00	0.00	307,098.00	0.00	273,829.00
13	EL	33.00	198,792.00	0.00	8,917.00	122,950.00	0.00	330,659.00	0.00	201,767.00
14	UNICAS	30.00	55,350.00	0.00	2,464.00	34,688.40	0.00	92,502.40	0.00	61,860.00
<b>Total</b>		<b>1,020.50</b>	<b>4,603,293.00</b>	<b>88,900.00</b>	<b>884,380.00</b>	<b>3,263,278.40</b>	<b>0.00</b>	<b>8,839,851.40</b>	<b>0.00</b>	<b>6,500,000.00</b>

## Summary of transnational access / service provision per installation

Project Number <sup>1</sup>	284432	Project Acronym <sup>2</sup>	CENDARI
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### Summary of transnational access / service provision per installation

Part. num.	Org. short name	Short name of infrastructure	Installation									
			Num.	Name	Operator country code	Unit of access	Total Estimated costs	Estimated unit cost	Min. quantity of access to be provided	Access costs charged to the GA	Est. num. of users	Est. num. of proj.
1	TCD	Trinity Long Room Hub	3	Trinity L	Ireland	week	0.00	0.00	36.00	0.00	6	6
5	KCL	Department of Digital Humanities	4	Departmen	United Kingdom	week	0.00	0.00	36.00	0.00	6	6
6	UGOE	Centre for Digital Humanities	5	Centre fo	Germany	week	0.00	0.00	36.00	0.00	6	6
7	NKP	Czech National Library	1	Czech Nat	Czech Republic	week	0.00	0.00	36.00	0.00	6	6
Grand Total							0.00			0.00		

### **1. Project number**

The project number has been assigned by the Commission as the unique identifier for your project. It cannot be changed. The project number **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

### **2. Project acronym**

Use the project acronym as given in the submitted proposal. It cannot be changed unless agreed so during the negotiations. The same acronym **should appear on each page of the grant agreement preparation documents (part A and part B)** to prevent errors during its handling.

### **53. Work Package number**

Work package number: WP1, WP2, WP3, ..., WPn

### **54. Type of activity**

For all FP7 projects each work package must relate to one (and only one) of the following possible types of activity (only if applicable for the chosen funding scheme – must correspond to the GPF Form Ax.v):

- **RTD/INNO** = Research and technological development including scientific coordination - applicable for Collaborative Projects and Networks of Excellence
- **DEM** = Demonstration - applicable for collaborative projects and Research for the Benefit of Specific Groups
- **MGT** = Management of the consortium - applicable for all funding schemes
- **OTHER** = Other specific activities, applicable for all funding schemes
- **COORD** = Coordination activities – applicable only for CAs
- **SUPP** = Support activities – applicable only for SAs

### **55. Lead beneficiary number**

Number of the beneficiary leading the work in this work package.

### **56. Person-months per work package**

The total number of person-months allocated to each work package.

### **57. Start month**

Relative start date for the work in the specific work packages, month 1 marking the start date of the project, and all other start dates being relative to this start date.

### **58. End month**

Relative end date, month 1 marking the start date of the project, and all end dates being relative to this start date.

### **59. Milestone number**

Milestone number: MS1, MS2, ..., MSn

### **60. Delivery date for Milestone**

Month in which the milestone will be achieved. Month 1 marking the start date of the project, and all delivery dates being relative to this start date.

### **61. Deliverable number**

Deliverable numbers in order of delivery dates: D1 – Dn

### **62. Nature**

Please indicate the nature of the deliverable using one of the following codes

**R** = Report, **P** = Prototype, **D** = Demonstrator, **O** = Other

### **63. Dissemination level**

Please indicate the dissemination level using one of the following codes:

- **PU** = Public
- **PP** = Restricted to other programme participants (including the Commission Services)
- **RE** = Restricted to a group specified by the consortium (including the Commission Services)
- **CO** = Confidential, only for members of the consortium (including the Commission Services)

- **Restreint UE** = Classified with the classification level "Restreint UE" according to Commission Decision 2001/844 and amendments
- **Confidentiel UE** = Classified with the mention of the classification level "Confidentiel UE" according to Commission Decision 2001/844 and amendments
- **Secret UE** = Classified with the mention of the classification level "Secret UE" according to Commission Decision 2001/844 and amendments

**64. Delivery date for Deliverable**

Month in which the deliverables will be available. Month 1 marking the start date of the project, and all delivery dates being relative to this start date

**65. Review number**

Review number: RV1, RV2, ..., RVn

**66. Tentative timing of reviews**

Month after which the review will take place. Month 1 marking the start date of the project, and all delivery dates being relative to this start date.

**67. Person-months per Deliverable**

The total number of person-month allocated to each deliverable.

**Project: CENDARI**  
**Annex 1 to the ECGA**  
**Part B – Narrative information**

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## **B.1 Concept and objectives, progress beyond state-of-the-art, S/T methodology and work plan**

### **B.1.1 Concept and project objectives**

#### **Concept**

The Collaborative European Digital Archive Infrastructure (CENDARI) will provide and facilitate access to existing archives and resources in Europe for the study of medieval and modern European history through the development of an 'enquiry environment'. This environment will increase access to records of historic importance across the European Research Area, creating a powerful new platform for accessing and investigating historical data in a transnational fashion overcoming the national and institutional data silos that now exist. It will leverage the power of the European infrastructure for Digital Humanities (DARIAH) bringing these technical experts together with leading historians and existing research infrastructures (archives, libraries and individual digital projects) within a programme of technical research informed by cutting edge reflection on the impact of the digital age on scholarly practice.

The enquiry environment that is at the heart of this proposal will create new ways to discover meaning, a methodology not just of scale but of kind. It will create tools and workspaces that allow researchers to engage with large data sets via federated multilingual searches across heterogeneous resources while defining workflows enabling the creation of personalized research environments, shared research and teaching spaces, and annotation trails, amongst other features. This will be facilitated by multilingual authority lists of named entities (people, places, events) that will harness user involvement to add intelligence to the system. Moreover, it will develop new visual paradigms for the exploration of patterns generated by the system, from knowledge transfer and dissemination, to language usage and shifts, to the advancement and diffusion of ideas.

Two domains have been chosen as case studies to develop this flexible research environment, in the first instance for historical research, but easily adaptable in future for other humanities domains. The first case study will be in the area of First World War studies, a timely area of research as we are fast approaching the centenary of this pan-European conflict that is already generating much interest from academics to the general public across Europe. The second case study will focus on mediaeval history in the creation of an Atlas of Medieval Culture that will develop new paradigms from which to investigate and bridge linguistic, cultural and spatial boundaries.

These two groups of historical scholars with seemingly divergent needs and concerns will be brought together under the CENDARI umbrella to address wider questions of history and identity as well as spatial and temporal relationships in Europe. This collaboration will add a further interpretive layer to the development of the infrastructure. The involvement of a wider researcher community as well as cultural heritage organisations will ensure its broad relevance beyond the test cases. By remapping the European archival and documentary landscape and encoding this remapping into the enquiry environment, CENDARI sets up the conditions necessary for genuinely transnational and pan-European research that will facilitate the emergence of new paradigm for humanities research and a new consciousness of European history.

#### **Objectives**

##### **Aims**

- *to apply technical innovation to increase the accessibility and visibility of archives within a digital platform for the wide benefit of scholars, starting with two rich case studies in critical areas of historical enquiry;*
- *to apply cutting edge computational techniques (eg datamining, visualisation, annotation, shared research environments, multilingual access to digital assets) to the domain of historical research*

##### **Related objectives**

- *to establish an appropriate technical platform for digital archival research, from underlying ontologies through the registry/repository layer to the user interface search and interrogation tools*

##### **Related Milestones**

- *MS 6 Ontologies defined, MS 7 Tool prototypes available and MS 10 Beta release of Portal and VRE*

The CENDARI project will address the need to create integrated digital archives and resources by working with existing research infrastructures and resource holders in Europe for the study of medieval and modern history. This will encompass archives, libraries and resources held outside of traditional archival settings (a hallmark of the digital age). It is the goal of the Capacities programme to 'optimise the use and development

of the best research infrastructures in Europe.' Centralisation of investment around particular traditional physical infrastructures may lead to this optimisation in many fields of science and knowledge, but the nature of the historical record, where unique collections of varying scales and scopes exist in all countries, means that such consolidation is neither possible nor desirable. CENDARI will contribute to the Europe 2020 strategy for smart, sustainable and inclusive growth by bringing balance to the development of the historical record. The Digital Agenda must not be delivered only to those areas with heightened competency and capacity for these developments. This commitment to leveraging the power of the digital age to transform scholarship into a more (rather than less) inclusive activity, is central to CENDARI. As such, the project will indeed contribute to the restructuring of the scientific community, but not along the lines of digital 'haves' and 'have nots', but rather as a force to ask new research questions in line with the development of a unified European consciousness.

CENDARI will boost European integration by harnessing technology to expand the amount and utility of information available to the historical knowledge creation process. This significant aspect of CENDARI as playing a catalysing and leveraging role will be its most important strength, using the experiences in larger and better-resourced archives to create a robust infrastructure that will also highlight and integrate the collections of smaller and less well-exploited archives.

#### Aims

- *to add value to previous investment by partnering with DARIAH for the building of infrastructure while coordinating with cognate projects such as, EHRI and Europeana;*
- *to integrate historical research into the wider communities of data infrastructure in Europe*

#### Related objectives

- *to work closely with DARIAH partners to contribute to the development of DARIAH tools and services*

#### Related Milestones

- *MS 11 Business Plan and MS 12 Handover*

The research aspects of this bid will be led by strong DARIAH partner institutions so as to integrate seamlessly with DARIAH's own development. This aspect of the CENDARI project will address the need to create a robust facility for the long term that is integrated with the major infrastructural developments for the sector, in particular DARIAH, but also many others (see Section 3.1.2). By bringing together the concerns of the scholars forming these strong transnational networks with the work of DARIAH, CENDARI will contribute to the alignment of DARIAH's developments with scholarly needs.

#### Aims

- *to use the transnational integration brought about through the development of CENDARI to advance historical methodologies and practices, including technical (e-history), comparative and integrative approaches using the test case as a model for further development to answer questions of European history and identity on a larger scale;*
- *to adapt and develop cutting edge technologies to deliver archival data to remote historical researchers*

#### Related Objectives

- *to ensure the CENDARI platform is as responsive to user needs as possible: robust, secure, intuitive and adding significant value to the resource delivery (archival) and resource interpretation (scholarly) processes*

#### Related Milestones

- *MS 1 Project Advisory Board established, MS 3 User requirements defined and MS 9 First feedback loop*

The opportunity inherent in the CENDARI project to develop methods that surpass the current state of the art in creating an integrated, transnational understanding of historical events is huge, as it is the state of the records themselves that has previously stymied the realisation of this kind of approach. In addition, the methods of the digital age will provide a further transformative layer to the research the CENDARI infrastructure will enable. This development will be widely communicated within the disciplinary communities enabling rapid uptake of these new findings, and impacting in particular on the development of young scholars. The emphasis on access across the countries of Europe should be a particular gain for researchers in the Eastern and Southern regions of Europe as they will have enhanced access to the dominant Western archives, while their own research infrastructures will be receiving much needed assistance with the integration and surfacing of their unique holdings within a broad platform for research.

#### Aims

- *to create effective processes for breaking down the digital divide, providing the framework for researchers to not only access previously unavailable archival materials, but engage with them in new and novel ways as individuals and within virtual research clusters*



**Related objectives**

- *to populate the CENDARI technical platform with the broadest possible set of archival data relevant to the two case study areas, including both well-known, well-structured data and information from and about so-called 'hidden' archives*
- *to integrate this data as tightly as possible across sources and formats*

**Related Milestones**

- *MS 2 Archive Directory complete, MS 4 Guide Framework established and MS 8 First funding call released*

CENDARI's Transnational Access and Service activities will create a uniquely powerful set of mechanisms for supporting traditional scholars in enhancing the use they make of technology in their research. But technology alone cannot do that. The human processes are of equal importance: for it is a culture change within research methods but also within the normally siloed library and archival communities as much as a technological innovation that is at the heart of CENDARI.

Delivery on the objectives via the named milestones will be further explained in section 1.3 below.

**B.1.2 Progress beyond the state-of-the-art**

Digital access has utterly transformed how humanists access primary materials. There has been massive investment in creating digital artefacts and developing the repositories that house them with both public and private monies -- and historians have hugely benefitted from this increased availability of material. Digitisation of our analogue heritage has been widespread and manifold -- texts (books, articles, manuscripts) either as images or full text, and more laterally images (both moving and still) -- have been a driving force in the cultural heritage sector (especially museums, libraries and archives), the laboratory of the humanities. This programme of digitisation, however, has been extremely uneven, not only from country to country, but within countries depending on the resources available to individual researchers and institutions. Even within countries that have generous initiatives, smaller, less resourced institutions will often hold important assets, rarely if ever seen by the research community. Moreover, resources developed by database providers in the private sector have created another divide: giving researchers only at institutions that can afford to purchase them access to these important resources.

Even in those places where enhanced access to materials has been achieved, the possibilities enabled by digital access have not really been transcended by the research community as one might expect. The humanities have not experienced the type of paradigm shift in research methods and insights that other disciplines in the sciences and social sciences have as a result of processing and manipulating digital artefacts. The main goal of CENDARI, therefore, is to address this imbalance of provision and this underutilisation of opportunity by transforming the ways in which humanists conduct research using digital archives and resources, without allowing these enhancements of process to have a negative shaping effect on the inputs to their work. CENDARI's basic approach is twofold: 1) capitalising on previous European investment in digital infrastructure represented by DARIAH and throughout Europe and beyond in the digitisation of cultural heritage materials; and 2) leveraging this previous investment to uncover 'hidden' archives and bringing them into the CENDARI infrastructure to become part of the public record.

**E-History and the State of the Art**

CENDARI will provide both a visual and semantic palette from which understandings of time and space can be seen shifting over time with borders continuously contested and realigned causing linguistic, cultural and economic shifts. The case studies chosen for CENDARI are cases in point: during both periods, conflicts and wars hastened the displacement of people and the redrawing of borders; old empires died and new political entities were born; religious, cultural, social and technological transformations resulted in the creation of new communities drawing on diverse forms of allegiance and conflicting conceptions of territoriality. They present very different challenges, however, which will test the development of the CENDARI infrastructure in different ways, due to divergences in: collection practices, prevalent media, linguistic and textual conventions; geographical spread; archival consolidation and other factors. This pairing of the two case studies will therefore create the most robust possible basis for CENDARI.

**Case Study 1: First World War Studies and the 'Hidden' Archive**

Almost a century after the end of the conflict on 11 November 1918, the First World War continues to attract intense scholarly investigation and public interest. Yet even after nearly a century of study, aspects of that war remain unknown or misunderstood. A war between nations and empires was for many decades investigated and interpreted from national perspectives against a background of international rivalry and

confrontation, with obvious limitations.

The early twenty-first century has seen the rapid development of global and cross-border institutions and academic and professional networks – such as the *Historial de la Grande Guerre* at Péronne in France (founded 1992)<sup>1</sup> and the International Society for First World War Studies (founded 2000),<sup>2</sup> enabling the development of a better understanding of the First World War as European-wide. There are also significant extant resources available, including many already in digital forms, but they are widely scattered and therefore unable to support research requiring transnational or comparative approaches spanning disciplines, locations and modalities of scholarship. Drawing together this contested but rich historical record into a consolidated research infrastructure will facilitate great progress in the state of our knowledge of the 20th century, not just as scholars, but as citizens.

### **Case Study 2: Creating an Atlas of Medieval Culture**

The CENDARI project will draw together resources to investigate the consciousness of place in medieval culture through the examination of texts, not only literary ones but especially historiographical, geographic and lexicographic texts. Linguistic analysis of the texts will establish a relationship between the evolution of the language and the local conditions, taking into account the impact of orality in the history of the evolution of Latin, achievable through an examination of masses of data. Tracing manuscripts, their cultural contexts and the places of their production, the places of their custody and the dissemination pathways for their content, we can build a reliable hypotheses on the sensitization through time of the various European geopolitical areas to the cultural currents flowing through and around them, much as the research now being carried out at Stanford University in which the transmission of ideas in the eighteenth century is being examined through the correspondence Enlightenment intellectuals.<sup>3</sup>

### **Project Baseline**

CENDARI will begin its activities from a solid baseline of knowledge and materials. Our technical partners have substantial expertise in developing scholarly research environments for the arts and humanities including, but by no means limited to, their experiences with the preparatory stages of the DARIAH infrastructure. **DARIAH** (<http://www.DARIAH.eu>) is a named infrastructure on the European Strategy Forum on Research Infrastructures (ESFRI) Roadmap. The mission of DARIAH is to enhance and support digitally-enabled research across the arts and humanities. DARIAH aims to conceptualise and build a virtual bridge between humanities and arts resources, initiatives and infrastructures across Europe.

Following the successful completion of the DARIAH preparatory phase project in February 2011, DARIAH has moved into the transition phase. During the transition phase, DARIAH will submit an application to the European Commission to establish a [European Research Infrastructure Consortium \(ERIC\)](#). This legal framework will facilitate the long-term sustainability of DARIAH.

To prepare for submitting the ERIC application, a Memorandum of Understanding (MoU), which enables countries to formally express interest in participating in DARIAH, has been signed by Austria, Croatia, Denmark, France, Germany, Greece, Ireland, Italy, Lithuania, The Netherlands, Slovenia and Switzerland.

Following the successful ERIC application, the DARIAH construction phase will begin in January 2012.

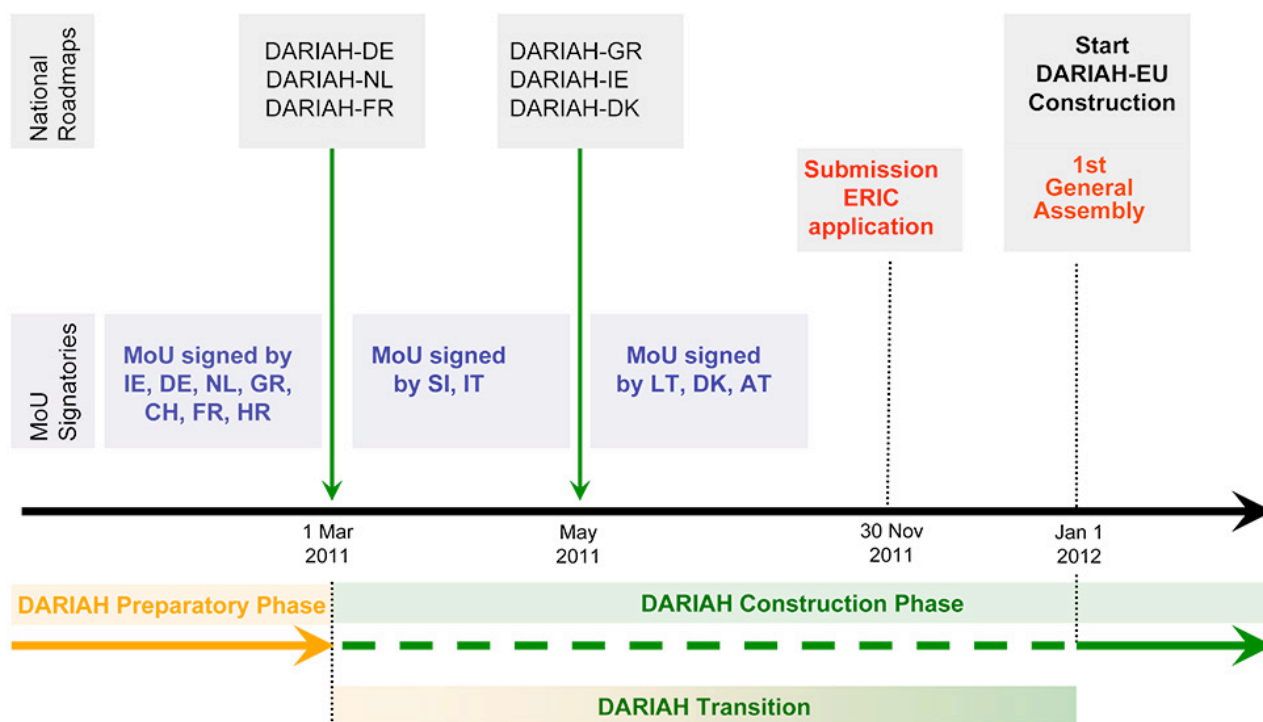
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<sup>1</sup> <http://www.historial.org/>

<sup>2</sup> <http://www.firstworldwarstudies.org/>

<sup>3</sup> Mapping the Republic of Letters Project. <http://republicofletters.stanford.edu/>

# DARIAH-EU ERIC Application Timeline



**DARIAH-EU ERIC application timeline**

In order to carry out its principal tasks, DARIAH will be organised in European Virtual Competency Centres (VCCs) and a DARIAH-EU Coordination Office. Each of the four VCCs is focused on one particular area of expertise:

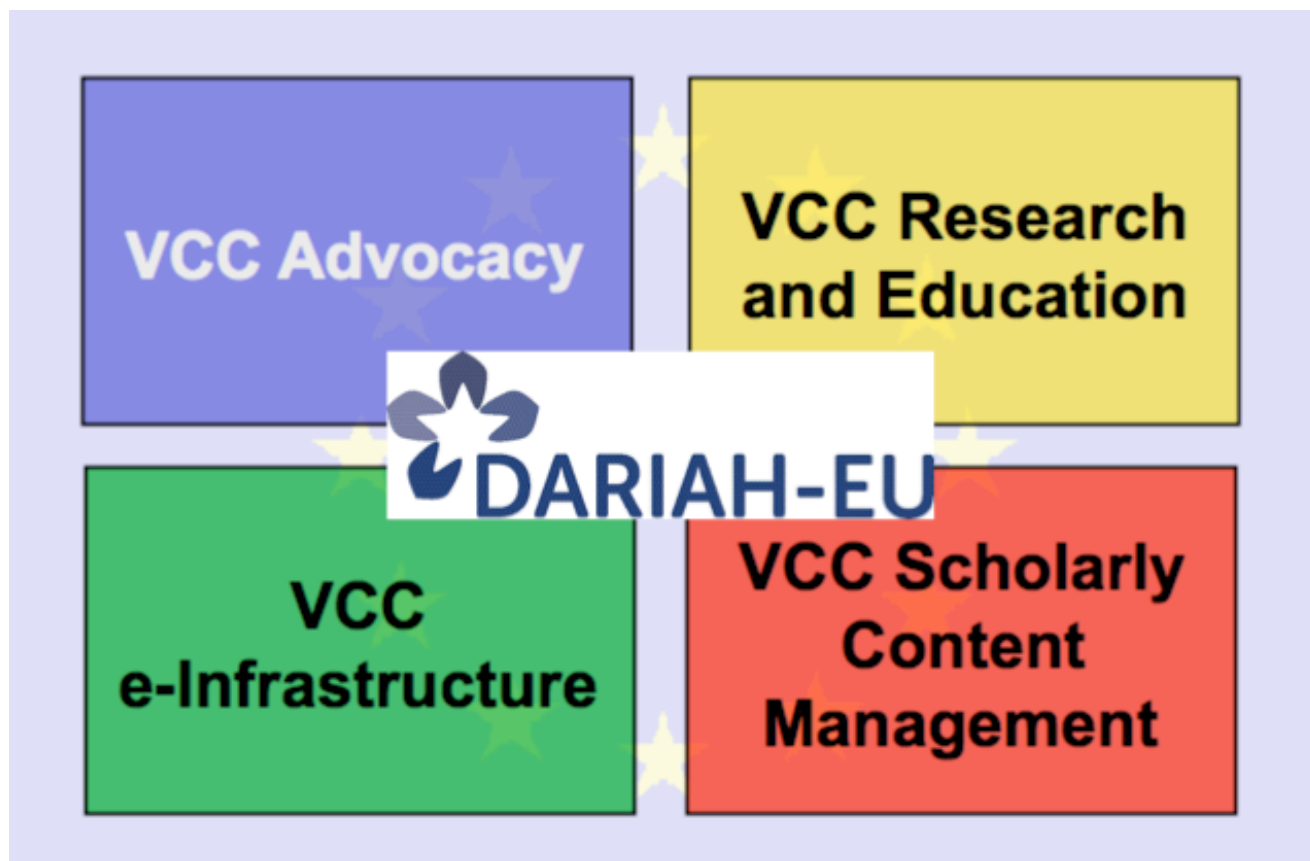
**VCC1: e-Infrastructure** - to establish a shared technology platform for arts and humanities research.

**VCC2 : Research and Education Liaison** - to expose and share digitally-enabled for arts and humanities research methods, training, expertise and tools.

**VCC3: Scholarly Content Management** - to expose and share scholarly content.

**VCC4: Advocacy, Impact and Outreach** - to interface with key influencers in/for for arts and humanities.

The DARIAH-EU Coordination Office (DCO) assumes overall responsibility and ensures that adequate operations across all DARIAH organisational units and partners.



### **DARIAH-EU Virtual Competency Centres (VCCs)**

The work to be undertaken in CENDARI can be mapped to DARIAH's VCCs. For example, WP7 (Knowledge Organisation Framework) will support the objectives of VCC3 (Scholarly Content Management). Similarly, the objectives of WP9 (Research Processes and System Architecture) support the goals of both VCC2 Research and Education Liaison and VCC1 e-Infrastructure. Finally, the work outlined in WP9 Research Space will contribute towards VCC1 and VCC2.

It is worth noting, that Partners 5, 6 and 11, who lead WP 7, 9 and 10 are also key participants in DARIAH.

The relationship between DARIAH and CENDARI is of particular importance to both projects, and will exist on both a formal (through meetings between senior representatives) and informal (through shared staff and partners) level. As such, while DARIAH contributes expertise and best practice, as well as a platform for visibility and long term sustainability, CENDARI will assist DARIAH at the outset of its build phase in determining what the best overall process is for integrating digital archival resources for a particular subject domain. The CENDARI experiences of building domain ontologies, registry infrastructure, integration pathways, and appropriate and seamless toolbox levels. Through its relationship with DARIAH, CENDARI will also benefit from the experiences of the European Holocaust Research Infrastructure (EHRI), a parallel development with similar goals of exposing and enhancing archival content through a mutually productive relationship with DARIAH.

In addition our digital humanities and digital library partners have a long tradition in the area of metadata creation. CENDARI will bridge the gap between these metadata standards and those developed by the computer science community to connect related data, for example exploring linked data methods and protocols (including RDF) to connect related data from heterogeneous sources on the web. CENDARI's research activities will also bridge the linguistic barriers that contribute to research silos. It will do this via a using a combination of manually translated terms, utilising (wherever available) existing ontologies, thesauri, and vocabularies of keywords and named entities (people and places). Moreover, it will integrate dynamic translation tools for data that cannot easily be pre-translated into multiple languages (titles, descriptions, etc).

In terms of content as well, CENDARI will leverage a strong baseline of digital material. The initial 'base data set' for CENDARI is the content held by our partners, in particular the Manuscriptorium project of Partner 7 (over 5 million digital images from across Europe and associated metadata) and Partner 13, which aggregates content from the 48 National Libraries of Europe (an estimated total of 180 million records, of which a substantial portion will be relevant to one of the CENDARI case studies, in particular the modern case study with the completion of the Europeana 1914-1918 project). Partners 2, 10, 12, 8, 9 and 14 will also bring smaller but substantial resources, in particular specialist databases such as the 1914-1918 Online Encyclopedia, Dictionaries of the Medieval Latin Consortium, BISLAM directory of Latin authors and the CERL Thesaurus (including provenance data). Once the technical infrastructure is prepared, these will be among the easiest materials to make accessible. But CENDARI will move beyond this baseline, so as not to merely be further enhancing already powerful resources. This is where our baseline network of content holders, many of whom signed on as supporters of the project in the application phase, will play a significant role, as the CENDARI team will use these connections to fill in the picture we have of the historical record.

The baseline for establishing networks of archives and content experts to feed into CENDARI is equally well-developed. In particular, we will draw on the 200+ member International Society for First World War Studies (based at partner 4) and the COST Action Medieval Cultures & Technological Resources (Medioevo Europeo), as well as linking into the European National Libraries (through Partner 13), the 400+ national, university and other library members of LIBER through their MOU with partner 12, and the European National Archives through the APE/APEX projects. In addition, CENDARI has independently solicited letters of support from a number of other archives and other content holders relevant for the pilot study areas, who agree to contribute to the project, including:

The German Historical Institute (Moscow)  
 The Austrian National Library (Austria)  
 The Archives State Agency of the Republic of Bulgaria (Bulgaria)  
 CEGES-SOMA (Belgium)  
 Oxford University Computing Services (UK)  
 The National Archives (Ireland)  
 The National Library (Ireland)  
 The Heeresgeschichtliches Museum (Austria)  
 E-codices Project (Switzerland)  
 The Catholic University of the Sacred Heart (Italy)  
 Lexicon Mediae et Infinae Latinitatis Polonorum (Poland)  
 Digital Scriptorium Project (USA)  
 Monumenta Germaniae Historica (Germany)

It will be the work of the CENDARI project to take these distributed and disparate digital resources as well as the commitment of the archives and other content holders to harness technology to enhance access to and knowledge creation from archival material, and create from them a tailored, contextualised digital platform for historical research.

### **Performance Indicators**

There will be a number of key indicators according to which CENDARI's success can be measured.

*Quantitative measures* will include: number of archives with content represented in the portal, number of records available for access through the infrastructure, number of new records created for CENDARI and available only through it; number of users accessing the resource; average user's time spent within the CENDARI environment. Some of these may be slow to become measurable, however, as the basic infrastructure will be developed and tested with a small data set and small user pool at first, then integrate larger amounts of content and be rolled out to a larger user base once the infrastructure is technically stable and refined to the initial user requirements through a series of iterative design cycles.

*Qualitative measures* will include: case studies of research projects which are enabled by CENDARI; user experiences of support staff in libraries and archives for whom CENDARI is an assistive, rather than primary, workspace; quality of the innovations provided in the final workspace, including their refinement as fit-for-purpose tools for historical scholars; reputation of the CENDARI platform and team as leaders in the development of cutting edge infrastructure for the arts and humanities. These measures will be able to be

captured via survey, focus group, and through measures of reference by other projects/scholars and presence at high-profile conferences and on key working groups.

### **Contribution to the coordination of high quality research**

#### **Enhancement of services**

The CENDARI project raises issues that can be addressed only through an interaction among centres of excellence: in historical research, in technical matters, and in archival and library science. This kind of interaction is, due to practical or cultural reasons, very difficult to realise. For this reason, the networking activities that will shape the digital infrastructural development and strengthen the communities of practice (among and between our scholar and archival stakeholders), is of great importance to the success of the bid. One of the keystone activities among these is the development of shared databases (called research guides) based on agreed standards, to assist in the networking of archives with scholars. The resulting relationships are key, but formal descriptions of them will also be suitable for inclusion along side of more developed finding aids. Because the goals of CENDARI reach beyond archival integration into the reshaping of scholarly practice for history a second critical plank in the platform of networking activities is that of the development of interdisciplinary methodologies. CENDARI represents a unique opportunity to revisit questions of European identity, and the writing of history from a long term, transnational perspective and to theorise historiography in the digital age.

The activities included under the rubric of 'Project Communications and Stakeholder Liaison' are all designed to build the scholarly programme beyond the input of our project partners and to ensure the widest possible audience for CENDARI's outcomes. The success of the project over the long term will depend on the ease with which archivists and young researchers are able to assimilate its use into their daily work routines so that it may transform their methods and practices without being seen as an interference or an irrelevance to high quality engagement with historical materials. It will also depend, however, on a wide scholarly acceptance, as well as public acceptance, as a manifestation of the public investment that will deliver it. The final aspect of the networking activity is that of sustainability, as the funded term of the project will be short in the context of its full lifecycle. Coordinated planning for the period after the funded activity will begin from the first day of the project, to ensure that the investment in it is not diminished by difficulties in integrating CENDARI after the funded years.

#### **Increased provision of access**

In the modern age, scholars across the world rely on the remote access provided by archives, libraries and other holders of digital data. As a result, the frequency of necessity to travel to distant locations to consult unique or underexposed sources has lessened, and the nature of a scholar's knowledge upon arrival at an archive may be higher. Yet, the arrival of the digital age does not mean that the era of research travel has come to an end. Much to the contrary, digital access to records has in many cases allowed a scholar to recognise more thoroughly the reasons why a certain source or sources may be of importance through access to a digital surrogate, and/or to pose more subtle, informed questions about records which may or may not possess an obvious basis for comparison.

The CENDARI provision for transnational access activities will support these research requirements by enabling researchers physical access to archive partners' collections and to the expertise in digital methods held in our competence centres on the basis of an application process; 2) by feeding the results from these researchers' physical access to resources back in to the CENDARI platform, for the use of all CENDARI users. In each of years two through four, therefore, we will have open calls for researchers working in the subject areas of the testbed cases, each facilitating 2 scholars per institution per year (10 per year across the domains (30 in total), including those at PhD level) to undertake investigations on projects of their choice for which access to our partner archives is required. Their research may be of between 6 weeks and 10 weeks duration. This call will be widely publicised to our audiences through the extensive networks of our full partners and through the wide range of instruments we have connected and will connect with.

#### **Advances over state of the art of services**

CENDARI will synthesise these investments by designing a technical platform – an 'enquiry environment' – that will allow scholars to conduct wholly new forms of research via aggregated datasets, or digital tools that allow temporal and spatial insights over vast quantities of data that a single scholar could not take in even in a lifetime; by allowing groups of scholars to collaborate and share insights in a seamless research

environment; and by overcoming linguistic barriers to access. These computer-mediated interventions in the scholarly research process will move us closer to creating that paradigm shift so frequently discussed.

By working with DARIAH as a partner leveraging its human and technical infrastructure, innovative solutions for data collection, integration, management, curation and annotation will be collaboratively developed and tested by the user groups associated with CENDARI's test cases, ultimately feeding back into the DARIAH infrastructure to benefit other user communities working with the DARIAH platform. This will allow for an integration of both digital assets and infrastructures into virtual facilities. These virtual facilities must be innovative, allowing researchers easy and intuitive access. CENDARI will actively engage its primary user community – senior and junior researchers of the mediaeval and modern periods – brought to the project by the strong scholarly networks of our partners and our associate partners – spreading its nets widely in its testing and design phase to create virtual platforms that keep non-technical researchers engaged.

### **B.1.3 S/T methodology and associated work plan**

#### **B.1.3.1 Overall strategy and general description**

The activity of the CENDARI project team will be organised around 14 workpackages, leading to the delivery along 12 milestones.

The workpackages are:

- WP 1 Management
- WP 2 Dissemination and Sustainability
- WP 3 Training and Coordination of transnational access
- WP 4 Methodology and archive user requirements
- WP 5 Investigation and description of archives
- WP 6 Knowledge Organisation Framework
- WP 7 Data Integration and Semantic Services
- WP 8 Research Processes and System Architecture
- WP 9 Research Spaces
- WP 10 Transnational access: Czech National Library
- WP 11 Transnational Access: Bibliothek fuer Zeitgeschichte
- WP 12 Transnational access: Trinity College Dublin
- WP 13 Transnational access: Kings College London
- WP 14 Transnational access: University of Goettingen

In general terms, the CENDARI consortium's three main stakeholder groups (historical, archival and technical) will each drive one of the three main sets of activities. The end user perspective, that is the historians and subject archivists, will drive the Networking Activities while the archives and resource holders will be shaping the Transnational Access Activities. Joint Research Activities will be the key to what brings the final CENDARI platform beyond the state of the art, and will be led by DARIAH partner institutions, recognised experts in the implementation of technical projects for the arts and humanities.

To be more specific, within the 10 Workpackages structuring CENDARI, there are four main functions served. WPs 1 ("Project Management") and WP 2 ("Project Communications and Stakeholder Liaison") serve aims of the **delivering and sustaining the full project: ensuring** progress within its development lifecycle (WP1), ensuring vitality beyond its funded phase, and ensuring broad impact across its audiences (WP2). These two WPs, and in particular WP 1, will ensure the smooth running of the consortial management, which consists of a General Assembly consisting of representatives of all partners plus an Executive Board consisting of WP leaders, with additional representation by non-WP leaders if it is felt that certain stakeholder interests are not adequately represented. (The consortium management structure is described in more detail in section B.2.1)

The training elements of WP 3 also cross over into the second of the four functions, which is to **ensure end user buy-in**. Scholars will not use an infrastructure they do not understand, or which does not reflect their needs. For this reason, we must investigate the methodological implications of CENDARI (WP 4) as we build the infrastructure itself. We must also ensure that we maximise the content visible within the infrastructure. The Google age has set a high bar for inclusion, but many of the most significant holdings for historians may not be easily visible in a sharable digital form. What is not visible could be forgotten, and

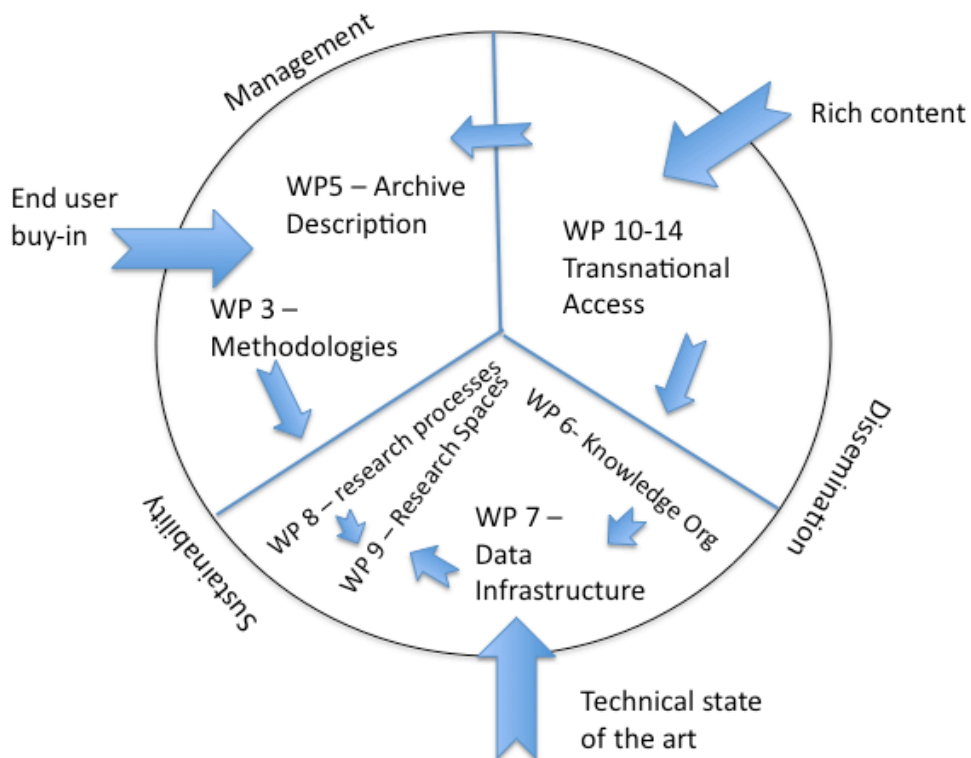
this is not an acceptable proposition either to scholars or to citizens of those areas whose heritage is represented in these less well-developed holdings. This is the rationale behind WP5 (“Investigation and Description of Archives”).

The activities of WP 5 will also thereby create an interface with the next of the four functions, the **maximisation of content in the infrastructure**. Our relationships with the archives, museums, libraries and other institutions that hold relevant content for CENDARI will be critical for building the richness of content the ‘enquiry environment.’ The transnational access coordination in WP3 will enhance the user communities in 5 key infrastructures, represented by WP 10 (researcher mobility for the Medieval era), WP 11 (researcher mobility for the First World War) and WPs 12-14 (researcher mobility across the domain areas).

The final function of the CENDARI WP structure is to create a digital infrastructure that is build upon **technical best practice**. Each of the fours RTD WPs plays a role in this, and in the integration of this aim with the others. WP 6 (“Knowledge Organisation Infrastructure”) will be a critical interface with the content holders, building upon schemas this community recognises (such as EAD) and assuring them that their content will be integrated efficiently and responsibly. A similar role is played by WP 8 (“Research Processes and Technical Infrastructure”), which has strong interconnection with WP 4 (“Methodology and Archive User Requirements”) so as to ensure from a technical perspective that the infrastructure meets the needs of the scholars who will use it. WP 7 (“Data Integration Infrastructure”) delivers the ‘back end’ functions that will ensure the platform is reliable and efficient in its processing on complex queries. Finally WP 9 (“Research Spaces”) will build the functional tip to the CENDARI iceberg, creating the outward facing interfaces and tools that researchers will use to mine the riches of the CENDARI content.

Technical development will follow Agile development principles, involving iterative cycles of development and evaluation throughout the WP, producing successively more mature software releases that support evolving user requirements, and are informed by the research practices of the communities involved. These iterative development cycles that will involve close collaboration with three of the groups participating in CENDARI communities: the historians, the archivists and the e-Infrastructure experts.

**Pert Chart**





### **B.1.3.2 Timing of work packages and their components**

The project milestones and the timing for their delivery are as follows:

- MS 1 External Expert Advisory Board recruited, Month 6
- MS 2 Archive Directory completed, Month 6
- MS 3 User requirements defined, Month 6
  
- MS 4 Guide framework established, Month 9
- MS 5 Metadata scheme defined, Month 12
- MS 6 Ontologies defined, Month 12
- MS 7 Tool prototypes completed, Month 12
- MS 8 First funding call released, Month 13
  
- MS 9 First formal feedback loop, Month 18
- MS 10 Beta release portal and VRE, Month 22
- MS 11 Business plan, Month 32
  
- MS 12 Handover, Month 48

These milestones cut across the 14 workpackages, providing checkpoints for the balanced development of the project across the types of activities. They also represent 4 distinct phases within the project:

1. Start up and establishment of the collaborative baseline (Months 1-6). At the end of this phase, the project will have its rudimentary data coverage (MS 2), technical requirements (MS3) and intellectual underpinning (MS1)
2. Essential framework development (Months 6-12). Within this phase, the start up baseline will be extended to include frameworks for the metadata (MS5), ontologies (MS6) and archival information gathering (MS4), as well as tool prototypes (MS7). This will enable meaningful introduction of archival access through the first funding call (MS8).
3. Population and refinement of the platform (Months 12-36). In this phase, the long work of applying the standards, gathering and integrating data, and applying the technical specifications will be carried out. These are the most time-consuming elements of the project 'build', and this phase is therefore the longest overall. Within this time, feedback loops will be established to ensure the user requirements or technical specifications are refined where and when necessary (starting with MS9) and the VRE and portal will be brought to beta release to allow user testing to begin on a live and growing data set (from MS10). This phase will also see the development of the business plan, which will guide the final phase of the project (MS11)
4. Project closure. In this final phase, the debugging of the system, completion of the data integration, documentation and consolidation of results will all occur, leading up to a handover to DARIAH at the end of the project (MS12).

Progress reports will be prepared at months 18, 36 and at project end. The Gantt chart which follows on the next page shows the timing of project activities toward the timely achievement of milestones and reporting deadlines.

**Gantt Chart**

	MS1-3		MS 4-8		MS 9			MS10	MS 11				MS 12			
	Y1 Q1	Y1 Q2	Y1 Q3	Y1 Q4	Y2 Q1	Y2 Q2	Y2 Q3	Y2 Q4	Y3 Q1	Y3 Q2	Y3 Q3	Y3 Q4	Y4 Q1	Y4 Q2	Y4 Q3	Y4 Q4
WP1 Full consortium Meetings	█				█				█				█			█
WP1 Activity Reports						█						█				█
WP1 Establish EEAB	█															
WP2 Logo, website, launch	█															█
WP2 Strategy workshop								█								
WP2 Handover plan draft/final														█		█
WP2 Business plan draft/final									█		█					
WP3 Summer Schools							█								█	
WP3 Access Call 1				call	activity											
WP3 Access Call 2								call	activity							
WP3 Access Call 3												call	activity			
WP4 User Requirements Defined	█															
WP4 Expert Seminars						█					█					
WP5 Full Archive List	█															
WP5 Archive Guide workshops		█														
WP5 Guide Structure agreed			█													
WP5 Analysis of finding aids			█		█											
WP5 Archive Networking phase			█		█		█		█		█		█		█	
WP6 Ontologies: draft, beta final			█		█		█		█		█		█		█	
WP7 Prototype tools																
WP7 Validated Researcher Toolkit					█									█		
WP7 Resource repository build					█		█		█							
WP7 Crosswalks design and apply									█		█		█		█	
WP7 Final Debugging										█				█		█
WP8 Specification of VRE			█													
WP8 User Testing (pre and beta)			█					█				█				
WP8 Documentation (draft, final)												█				█
WP9 VRE beta, final releases								█					█			

## Risk Assessment

The following table outlines the possible risks seen to project completion and the contingency plans in place to address these eventualities, should they transpire.

<i>Risk</i>	<i>Impact</i>	<i>Probability</i>	<i>Contingency Plan</i>
Technology development failures	Medium	Low	CENDARI includes a strong technical oversight component. Iterative releases along an agile development pathway will ensure that proper assessment of all technical choices is made before any irreversible commitment to those choices is made.
Impact lessened because access to content is denied	High	Low	CENDARI partners already hold enough content to make the infrastructure worthwhile, but the expectation of the Google age is that all content should be seen from one port of call. This is the reasoning behind the many different pathways we have to content holders, as each institution that hesitates to work with CENDARI may have different reasons for doing so: if trust, culture or language, we have our regional representatives; if financing, we have small grants; if expert investigation is needed, we have the researchers working on the guides.
Common historical methodologies prove difficult to translate into algorithmic processes	Medium	Medium	The cross participation between workpackages 8 “Research Processes and System Architecture” and 4 “Methodology and Archive user requirements” is designed to address this possibility. Ensuring the conversation remains a two way street will maximise progress in this domain.
Loss of critical competencies or of key people in the project	Medium	Medium	We have ensured that there is an acceptable level of redundancy both in our contact base at each institutional partner, and among the partners (having recruited two platform experts, two tools developers etc.). We have also dedicated proper resources to key areas, so should any key people leave, the worst case scenario is that the project plan has to be revised to enable a new round of recruitment
Withdrawal of project partners	High	Low	We have ensured that there is an acceptable level of redundancy among the partners (having recruited two platform experts, two tools developers etc.) while also purposefully limiting the size of the consortium for the sake of efficiency. While the withdrawal of a partner would be unfortunate for the project, we feel it would not be difficult to fill any gaps left in the short to medium term.
Loss of internal communication and awareness of project activities	Medium	Medium	The project coordinator will ensure via the full time project manager that relationships are maintained with all partners in this modest consortium, and regular checks will be made to ensure partners are clear about progress and on target.

Non-performance of partners	Medium	Low	The project coordinator will monitor progress in all areas of the project closely against the detailed project plan, and regular checks will be made to ensure partners are clear about progress and on target.
Lack of interest within the user communities of our project	Medium	Medium	The entire rationale behind the “Dissemination and Sustainability” WP is to manage this risk. By keeping close to our user base from the beginning, and by dedicating resources to manage those relationships, we feel this risk can be avoided.
Changes in technology rendering the system obsolete	Medium	Low	We have been sure to build our plans on current best practice, which will safeguard us from any but the most sweeping changes in technology (changes it would be unlikely we would not see coming already)
Physical threats to data and servers	High	Low	By keeping our data distributed and mirroring our infrastructure across partner systems, we feel there is very little chance we will lose data or development time.
Legal problems: IPR, liability etc.	Low	Low	Partner institutions are all ensured for liability, and a clear plan has been developed to deal with any arising IPR questions. Also, as CENDARI is largely only creating a registry of, rather than actually hosting content, this should be a minimal risk.

## B.2. Implementation

### B.2.1 Management structure and procedures

Trinity College Dublin will lead the project, providing management and strategic vision for the dissemination of the project’s work. Working with the project Coordinator to deliver the project will also be a Management Support Team including dedicated project manager with experience in the management of EU projects as well as members of Long Room Hub core staff with special experience in aspects of the management and communications of large-scale research projects.

The administrative structure of the consortium will consist of a General Assembly consisting of all project partners, and a smaller Executive Board reflecting leadership of the workpackages/stakeholder groups in our project, namely:

- Researchers from across the spectrum of historical and other relevant disciplinary approaches to the history of the Great War (military, social/cultural, economic, etc) and the Medieval era who will play a critical and leading role in identifying the most important collections for their work, as well as theorising, and contributing to, the development of tools and methodologies to interrogate the federated resources;
- Archives, libraries and museums, who will be at the core of the development, as it will be their collections that comprise the infrastructure itself. Many of these will be participating as Associated, rather than full partners to reduce the administrative burden and reflect the patchwork nature of key resources for historical study;
- ICT/e-Science Experts: As an initiative of the 21st Century, the CENDARI infrastructure will harness cutting edge technologies for the federation, manipulation and customisation of digital content and resources. These partners will not only ensure the creation of the most flexible and future-proof digital infrastructure possible, they will also develop protocols robust enough to interrogate sources from very different time periods, creating common technological approaches to sources from very different chronological periods.

Each of the three strands of activity (scholarly, archival and technical) will be comprised of a number of

work packages. Although not a formal reporting line, within each strand there will be a single WP leader overseeing coordination within their area (Researcher - UOB, Archival – USTUTT and Technical – KCL) assisting the overall project coordinator with developing and integrating the activities in their areas. These partners and the overall project coordinator (TCD) will be members of the Executive Board, which may also have up to 2 further members as to be agreed by the first meeting of the General Assembly.

Within in each partner institution, a central contact will be appointed to coordinate activities and act as the final authority for budgeting and reporting purposes. These individuals will each have a back up contact who will be fully involved in the project as able to provide information and make decisions should the primary contact be absent for any reason (see institutional descriptions for the names of individuals with dedicated primary and secondary contact roles).

The General Assembly will meet at least once annually, and the Executive Board will meet at least 4 times annually (once in connection with the General Assembly meeting, once face to face independently of the General Assembly, and then two further times by tele- or videoconference).

The General Assembly shall be free to act on its own initiative to formulate proposals and take decisions in accordance with the procedures set out herein. In addition, all proposals made by the Executive Board shall also be considered and decided upon by the General Assembly.

The following decisions shall be taken by the General Assembly:

#### Content, finances and intellectual property rights

- Proposals for changes to Annex I of the EC-GA to be agreed by the European Commission
- Changes to the Consortium Plan (including the Consortium Budget)
- Withdrawals from Attachment 1 (Background included)
- Additions to Attachment 2 (Background excluded)
- Additions to Attachment 4 (Listed Affiliated Entities)
- Additions to Attachment 5 (List of Third Parties)

#### Evolution of the Consortium

- Entry of a new Party to the Consortium and approval of the settlement on the conditions of the accession of such a new Party
- Withdrawal of a Party from the Consortium and the approval of the settlement on the conditions of the withdrawal
- Declaration of a Party to be a Defaulting Party
- Remedies to be performed by a Defaulting Party
- Termination of a Defaulting Party's participation in the Consortium and measures relating thereto
- Proposal to the European Commission for a change of the Coordinator
- Proposal to the European Commission for suspension of all or part of the Project
- Proposal to the European Commission for termination of the Project and the Consortium Agreement

#### Appointments

On the basis of Annex I, the appointment if necessary of:

- Executive Board Members

The role of the Executive Board will be differentiated from that of the General Assembly as more one of hands-on management of functional areas within the grant than strategic decision-making. As such, the EMB will act as a local extension of the overall project coordination within each workpackage.

#### **External Expert Advisory Board**

An External Expert Advisory Board will be established to assist and facilitate the decisions made by the CENDARI project partners, and ensure that CENDARI's developments are in line with international norms for best practice. This Board will also carry out the evaluation of funding applications for Transnational Access Activities (see WP 2). Professor Jay Winter of Yale University has already agreed to act as Chair of this body. Other individuals who have indicated their willingness to assist us in CENDARI are Dr Conny Kristel, Netherlands Institute for War Documentation; Dr Helen Katsiadakis, Academy of Athens; Professor N Katzer, German Historical Institute Moscow; Professor Milan Ristic, University of Belgrade; Antonio Ghibelli, University of Genoa; Professor Francois Dolbeau, IHRT; among others. The final list of members will be agreed by the consortium at the kick-off meeting, but the final Board will have equal representation from our two historical case study areas as well as archival and technical perspectives, and will consist of not more than 10 people. The External Expert Advisory Board leaders will meet at least once yearly and will have telephone/video/web conferences as needed between these meetings.

### **Project and Workflow Management**

The coordinator will have the overall responsibility for ensuring that project milestones are met and that progress remains on time and on budget. Oversight will be maintained by regular communications between the Coordinator and all Workpackage leaders including both written communications (emails at least weekly) and meetings (by teleconference at least monthly). Integrative oversight will occur at the level of the annual project meetings (with representatives of all partners in attendance) and through the synthesizing role of the Executive Board (see above). These partners will not form a formal management layer, but provide specialist input regarding the connectivity and supportive interactions between WPs and activities in their areas. Workflow within individual workpackages will be the responsibility of the WP leader, and each WP leader has budgeted for a reasonable amount of travel costs to support the face-to-face meetings required within their workpackage, between their own and cognate workpackages, and between them and the central consortium coordination.

Communications between partners will be further supported by a fileshare management system (eg shared server space) and all hands communications mechanism (eg listserv) available to all at all times.

Quality of outputs and progress toward international best practice (rather than just project specific) will be assured by the regular interaction with the External Expert Advisory Board.

### **Project Plan**

The Gantt chart which appears under section 1.3 above shows how the major project activities will be coordinated and what dependencies will be under observation by the project coordinator, project manager, WP leaders, partners and their teams.

### **Interconnectivity between WPs**

Successful delivery of the CENDARI project will also depend upon successful ongoing interconnection between work packages along the timeline of the project's development. This will be guaranteed by a number of measures occurring throughout the project. The agreed project plan and the oversight of the Coordinator, Executive Board and External Expert Advisory Board will be the most important instruments for this purpose, but not the only ones.

### **Accession of new beneficiaries to the project**

Provision has been made within the CENDARI consortium agreement for the accession of new partners to the project by vote of the General Assembly and submission of the Accession document (Annex 3 to the CENDARI consortium agreement).

### **Legal**

For all issues associated with Intellectual Property protection, a detailed consortium agreement will be drafted on success of the project submission. However, some basic principles should allow for an open exchange of research and knowledge during the project, supporting longer-term collaborations into the

future. These principles are:

- Protection of any pre-existing IP, where all IP brought into the project by a partner will be protected;
- Protection of any IP generated by partners during the project, where all IP generated during the project by individual partners will be held by the partner who generated it;
- Making open source any standards or code implementing / supporting those standards;
- Protection of humanities research results and data brought into the project or generation within the project, where all humanities research results will belong to the humanities departments of the academic partners who generated the research. Using the technology (results of the project) does not in any way imply a claim to the results of the humanities research on the behalf of the project members. The technology is simply a platform to facilitate interesting new research for the humanities.

The details of this legal agreement will be drafted into the Consortium Agreement and signed on successful submission of the proposal.

### **Match between management structures and complexity and scale of the project.**

The CENDARI partners are currently negotiating a consortium agreement, which aligns the CENDARI management structure with the DESCA standard for medium to large projects. That said, the CENDARI network is small enough that general oversight by the coordinating partner is fully feasible, as is the assignment of the role of coordinator between the technical and social aspects of the project. The ability to deliver on these dual responsibilities is predicated on the provision of proper human resources, but the provision for a full time project manager (who will also contribute to project dissemination) who will cover this need for a single point of coordination to whom all partners can look.

### **Conflict Resolution Strategy**

The management structure outlined above for the CENDARI project encompasses both the internal leadership (central administration, work package leaders, and cluster leaders) and the external guidance (External Expert Advisory Board). Within this structure, the CENDARI Collaboration Agreement (based on the standard format in use at Trinity College Dublin for the management of European Commission-funded projects based within the institution, which is itself based upon the DESCA model) will clearly define roles and responsibilities for each partner and each partner role. This structure and clarity should ensure that the project runs efficiently and effectively over the course of its four years of activity. In case there should be disagreement among the partners, however, an Arbitration Board will be also named within the Collaboration Agreement, to be chaired by a senior academic and comprised of him/herself and three further expert members: one from a technical background, one from an archival background and one scholar. All parties signing the Collaboration Agreement will agree to abide by the Board's decisions in case of any dispute.

## B.2.2 Beneficiaries

### Partner 1. Trinity College Dublin: Coordinator, WP Leader 1 and 2

#### Organisation and key competence:

The Arts and Humanities at Trinity are particularly strong, and one of the strongest academic units within the Humanities is the History department, home to some of Trinity's leading humanistic researchers. In particular, the **Centre for Medieval History** and the **Centre for War Studies** are two recognised centres of excellence in historical research that will feed into the CENDARI project. The **Trinity Long Room Hub** is Trinity's Research Institute for the Arts and Humanities, founded and sustained through the collaborative effort of 7 academic Schools and the Trinity Library. It hosts a wide range of programmes, and supports the strategic development of interdisciplinary research programmes of scale, including **Digital Humanities**. Trinity has proven itself to be a growing force in this area, having recently launched the high profile 1641 Depositions Project (a collaboration with IBM), completed a project with Microsoft to launch an instance of the MS Sharepoint technology for Arts and Humanities research, and been awarded 6.8M by the Irish government to coordinate a national structured PhD in Digital Arts and Humanities. The **Knowledge and Data Engineering Group (KDEG)** in the School of Computer Science and Statistics has established a worldwide reputation in the research of *knowledge and semantic representation, adaptive portals for information analysis, educational systems, Adaptive Hypermedia systems and intelligent pedagogic systems*. KDEG has pioneered dynamic techniques for digital content retrieval, composition and automated customisation. The Trinity **Library** is world-class resource, both in terms of its collections and its staff. The library hosts roughly 10,000 external readers per year, is a copyright library for Great Britain and Ireland, and holds over 4.25 million volumes, including substantial collections of manuscripts and printed material relevant for both the medieval and modern strands of the CENDARI project. The Digital Resources unit is a new department dedicated to the development of digital resources and repositories from the universities special collections and treasures.

#### Role in project

Trinity will lead the overall project, as well as contributing specific expertise in the history of the First World War and Natural Language Processing, and providing Digital Humanities liaison between technical and scholarly expertise. These are all areas where Trinity has a recognised track record (see above). The Trinity Library will also contribute content to CENDARI and to the medieval case study.

#### Key Personnel

**Dr Jennifer Edmond** is Executive Director of the Trinity Long Room Hub. She has broad experience as a technology implementation advisor for the arts and humanities, and has led the development and implementation of the strategy for Digital Humanities at TCD. She manages a number of large scale funding grants as apart of her role as overall manager of the Long Room Hub.

**Dr Susan Schreibman** is the newly appointed Senior Lecturer in Digital Humanities. She is currently the Assistant Chair of the Text Encoding Initiative Consortium and a member of the Executive of the Association of Computers and the Humanities. She is the co-editor of *A Companion to Digital Literary Studies* (Blackwell, 2008) and *A Companion to Digital Humanities* (Blackwell, 2004).

**Dr Owen Conlan** is a Lecturer in School of Computer Science. Owen currently manages TCD's participation in 80Days and ImREAL (FP7) and will be the technical leader of the KDEG-coordinated CULTURA project (FP7) that aims to provide adaptive research environments for digital humanities researchers. Owen has authored over sixty scientific research papers.

**Dr Séamus Lawless** is a Research Fellow and Lecturer in School of Computer Science. His research interests include the use of Information Retrieval techniques to aid the leverage of open corpus content for Technology Enhanced Learning. Séamus has acted as a Digital Humanities Consultant for the past three years, and has published regularly in IEEE journals and major worldwide conferences.

**Professor John Horne** is Professor of Modern European History and was the first Director of the TCD Centre for War Studies. He is a member of the Executive Board of the Historial de la Grande Guerre and serves on the Advisory Boards of the Mémorial de Verdun and the National World War One Museum in Kansas City. His works on the First World War are widely published in English and in translation.

**Professor Alan Kramer** is Professor of European History. During the last two decades, he has been at the forefront of the development of the cultural history of the First World War. He is currently concluding a major research project on the 'International History of Concentration Camps.'



**Dr Bernard Meehan** is Keeper of Manuscripts in the Trinity Library, which is home to more than 20,000 collections of manuscripts and archives, dating from the 13th century BC to the present day

**Partner 2. Freie Universität Berlin, Department of History and Cultural Studies, Friedrich Meinecke Institute, Leader WP 5**

**Organisation and key competence**

Freie Universität Berlin (FU) is one of Germany's leading research institutions. It is one of nine German universities to have successfully completed the federal Excellence Initiative, thereby receiving additional funding for its institutional development strategy. With its concept of an "International Network University" it is systematically encouraging the internationalization of research in three major focus areas – area studies, humanities and life sciences. The university ranks 70<sup>th</sup> overall in this year's QS World University Rankings and 25<sup>th</sup> in the QS Arts & Humanities rankings.

The Friedrich Meinecke Institute (FMI) is a renowned historical research and teaching facility that is covering the entire range from Ancient History to Contemporary History. In close cooperation with historians at the Central Institutes of Freie Universität Berlin, the Institute for Eastern European Studies, the Institute for Latin American Studies and the John F. Kennedy Institute for North American Studies, the academic staff of the FMI is in particular advocating a transnational approach to history.

In this context, the FMI is currently putting up an international online encyclopedia of the First World War (1914-1918-online. International Encyclopedia of the First World War) that is networking some of the leading experts in First World War related research. In 2014, 1914-1918-online will provide scholars, students and the interested public alike with an online, open-access, quality-assured and research-oriented encyclopedia that has the potential of becoming a paradigmatic e-history project.

Within the framework of CENDARI, the FMI will – as lead partner for WP 4 – oversee and coordinate the investigation and description of archives. It will host post-doc researchers responsible for three research guides (1. Asia/Latin America; 2. Eastern Europe; 3. Central Europe) and substantially participate in the development of interdisciplinary methodologies (WP 3).

**Role in the Project**

FUB brings strong scholarship and a regional complementarity to the researcher perspective on the First World War. They will lead WP 4 ("Investigation and Description of Archives") and contribute to researcher perspectives to WP 3 ("Methodology and Archive user requirements") and WP 7 ("Knowledge Organisation Framework").

**Key personnel**

**Prof. Dr. Oliver Janz** is Chair of Modern European History at the FMI and Editor of "1914-1918-online. International Encyclopedia of the First World War"

Additional staff will be assigned later on in the project.

**Partner 3. The Mathematical Institute of the Serbian Academy of Sciences and Arts, Leader WP 7**

**Organisation and key competence**

The Mathematical Institute of the Serbian Academy of Sciences and Arts, MISANU, (<http://www.mi.sanu.ac.rs/>) has more than 40 full-time and 150 part-time collaborators involved in a number of fundamental research and technological development projects. MISANU initiated a permanent cooperation with cultural institutions from Serbia (in the framework of the National centre for Digitization) and realized a number of concrete digitization projects: Old maps, engravings and photographs from the collection of the City Museum of Belgrade (1998), Electronic editions of Serbian mathematical journals and retrodigitized works, eCatalogue of Serbian Cultural Monuments, within the UNESCO in the framework of the Participation Programme (2004-2006), etc. The digitization group developed a Recommendation for the National Standard for Describing Digitized Heritage in Serbia with a definition of mappings to and from the most used international standards for metadata.

**Role in project**

MISANU will lead the development and deployment of the data integration infrastructure toolkits enabling the metadata cross-walks, integration of developed ontologies, extraction of key terms and integration of partner archives within the infrastructure. Furthermore, MISANU will contribute in the establishment of the archive and resource registries, ensuring that the application of generic data model and mechanisms for uniform identification and access to heterogeneous CENDARI content is applicable within CENDARI and compatible with DARIAH and EHRI outcomes.

### **Key Personnel**

**Dr Zoran Marković** received Ph.D. (in 1979) from University of Pennsylvania, Philadelphia. He had visiting positions at University of California, Berkeley, University of California Davis, and University of Amsterdam (Institute for Logic, informatics and linguistics). He is a research professor at MISANU and the Director of the Institute.

**Dr Žarko Mijajlović**, is professor of logic and algebra at the Faculty of Mathematics in Belgrade as well as working at and leading national projects as a part time collaborator at MISANU. He has published about 70 papers in domestic and international journals, and is the author or co-author of four books in logic and algebra. He is the editor of the journal *NCD Review* in the area of electronic archiving and digitization. He directed several projects in digitization and he was the editor of six compact disks in the domain of art and history of mathematics. He was awarded twice by Fulbright scholarship (1973 and 1991).

**Dr Zoran Ognjanović**, research professor at MISANU, received PhD in 1999. He is/was the project leader of a number of projects including two digitization projects within the UNESCO in the framework of the Participation Programme. He is the coordinator of the National Center for Digitization, Belgrade. He was the President of the Committee for digitization of the UNESCO commission of Serbia (2006-2010).

<h3><b>Partner 4. University of Birmingham, Leader WP 3 and 4</b></h3>
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### **Organisation and key competence**

Founded in 1900, the University of Birmingham is a well-established institution, both nationally and internationally, that offers high-standard teaching and research in most major disciplines, organised in five academic Colleges. The University is one of the leading research-based universities in the United Kingdom; the breadth of research expertise and first-class infrastructure is a distinctive characteristic of the University. The University is ranked 66th in the Times Higher Educational (THE) World University Rankings for 2009 and it is ranked 94th in the Jiao Tong (China) worldwide league table of universities 2009, and it is one of only 11 UK higher education institutions to feature in the top 100 universities. The University counts 2288 academic staff and researchers of which 289 in the College of Arts and Law. In the financial year 2008/2009, the University of Birmingham received a core grant from the Higher Education Funding Council for England of £144 million of which £44.2 million to support the core research activities. In addition to the latter, the University attracted externally and in a competitive manner £133.7 million in research grant and contracts. The University handles about 1800 research grants at any one time, including 550 in the area of Social Sciences, Arts and the Humanities. Such figures reflect the breadth and quality of the research activities and their critical mass taking place at the University. The University of Birmingham has experience in dealing with all Framework Programme matters. In FP7, the University has been awarded three European Research Council awards and also coordinates eight Collaborative Projects and three Marie Curie Initial Training Networks.

### **Role in project**

For CENDARI, Purseigle will lead WP3 and lead the training elements of WP2. He will also assist with the overall integration of the historians involved, contributing to WPs 9 and 10 as well. He is exceptionally well-placed for this role based on his position as Director of the International Society for First World War Studies.

### **Key Personnel**

**Dr Pierre Purseigle** is Senior Lecturer in Modern History. His research to date has focused on the comparative and European history of the war. Purseigle has published several articles, edited two volumes of essays, and lectured and presented seminar papers across Europe and in the United States and New Zealand. His comparative study of social mobilization in France and Britain during the Great War

will be published in Paris in 2011. In 2001, Purseigle co-founded, and has since presided over, the International Society for First World Studies, arguably the largest network of World War I historians in the world. Dr. Purseigle additionally serves as Associate Editor on the board of *First World War Studies*, the peer-refereed journal published for the Society by Taylor & Francis. He has provided editorial peer reviews for several international academic journals and reviewed funding applications for the British Arts and Humanities Research Council and the Canadian Social Sciences and Humanities Research Council. Dr. Purseigle sits on the Scientific Advisory Board of the Historial de la Grande Guerre (Péronne, France). Purseigle is also a strategic partner for *1914–1918 Online*, a print and web-based international encyclopedia coordinated by the Free University, Berlin and Trinity College, Dublin.

#### **Partner 5. King's College London, Leader WP 6**

##### **Organisation and key competence:**

King's College London is represented in CENDARI by the Centre for e-Research. The Centre works at the intersection between research methods and practice, digital informatics, and e-infrastructure development and practice. The Centre has worked with a wide range of researchers on realizing their research ICT needs but has a particular tradition in building research infrastructure solutions for the arts and humanities, as it incorporates the staff and experience of the former Arts and Humanities Data Service Executive (<http://www.ahds.ac.uk>), and the Arts and Humanities e-Science Centre (<http://www.ahessc.ac.uk>). Employing over 20 staff, the Centre has raised research income in excess of £2.5 million since its establishment in April 2008, and provides a masters programme in digital asset management.

##### **Role in project**

KCL-CeRch will lead on the Knowledge Organisation Framework (WP 7) research and development work in CENDARI and participate in the Data integration infrastructure Work package (WP 8). It will also take part in WPs 9 "Research Processes and Technical Infrastructure" and 10 "Research Spaces", and contribute to the overall harmonisation of the technical aspects of the work. It combines experience of over ten years of running the arts and humanities data services in the UK together with extensive research and development experience in more advanced arts and humanities e-Science projects. KCL-CeRch leads the technical and strategic work in DARIAH.

##### **Key Personnel**

**Sheila Anderson**, the director of CeRch and former director of the AHDS, is a recognized international expert on arts and humanities e-Science and research infrastructures. She leads the strategic work in DARIAH.

**Dr Mark Hedges**, deputy director for e-Infrastructures, leads the virtual research environment work that CeRch is doing for partner institutions at KCL. Prior to CeRch, Mark was the Technical Manager at AHDS. He has also worked for 17 years in the software industry, taking the technical lead on a number of large-scale development projects for industrial and commercial clients.

#### **Partner 6. Goettingen State and University Library, University of Goettingen, Leader WP 8**

##### **Organisation and key competence**

The Goettingen State and University Library is one of the largest scientific university libraries and one of the leading institutions in the development of digital library services in Germany. It participates in numerous national and international activities in the context of metadata, semantic technologies, preservation, digitisation, education, and virtual research environments.

The library creates virtual research environments for scientists on an institutional, national and international level. To support this, UGOE participates in numerous activities in the context of metadata, semantic technologies, preservation, digitisation and e-Infrastructure. Through all these activities, UGOE links local and international activities, infrastructure and research in the humanities, and establishes a solid technical and organisational foundation that aims to cater for the diverse perspectives and requirements in the humanities.

**Role in project**

In CENDARI UGOE will lead the modelling and implementation of the CENDARI virtual research environment, and ensures adequate links to DARIAH and EHRI. As part of its activities for virtual research environments, UGOE coordinates the D-Grid<sup>4</sup> humanities project TextGrid as well as several other research-oriented projects. UGOE participates in EHRI and leads the technical work in the construction of the ESFRI project DARIAH (Digital Research Infrastructure for the Arts and Humanities).

**Key Personnel**

**Dr. Norbert Lossau** is Director of the Göttingen State and University Library, where he moved from his posts as Library Director at Bielefeld University and Head of the Oxford Digital Library. He is a member of several national and international steering committees and advisory boards.

**Dr. Heike Neuroth** is head of the Research and Development department of the Goettingen State and University Library. Her e-Infrastructure activities include a leading role in the DARIAH management board as well as the board of the German Grid Initiative D-Grid. In addition to this, she participates in and leads various initiatives in the fields of digital libraries, long-term preservation, and metadata, and gives lectures in library and information sciences.

Additional staff will be assigned for the project start.

**Partner 7. National Library of the Czech Republic****Organisation and key competence**

The **National Library of the Czech Republic** (NKP) is one of the eldest Czech public libraries with collections of more than 6 million volumes, having irreplaceable cultural value for many cultures. As a leading institution in preservation and access to documentary heritage is also a coordination centre for research/development national programs. It is one of the technologically most advanced national libraries in Europe as demonstrated in the recently published TEL-ME-MOR analysis of CENL member libraries. It has participated in several EU/international projects (e.g. FPs – MASTER, VICODI; eContentPlus – ENRICH; Eureka – ECH:TOPICC; Culture2000 – COMTOOCI; Culture2007 – REDISCOVER, EMBARK). NKP is running 2 digital libraries from which Manuscriptorium is the largest digital library of manuscripts in Europe. Especially for this activity and its international impact in preservation of and virtual access to cultural heritage, it has been awarded the newly established UNESCO World Jikji prize (9/2005).

**Role in project and relevant experience**

NKP will bring its combination of technical expertise and experience with scholarly research and medieval material to CENDARI, participating across the networking, Transnational access and research activities.

**Key Personnel**

**Dr. Zdeněk Uhlíř** is deputy director of Historical and Music Collections and coordinator of the Manuscriptorium digital library and will provide coordination of the CENDARI work in NKP & work on interdisciplinary methodologies, infrastructure and transnational access, description of archives

**Mr. Tomáš Klimek** is a member of the Manuscriptorium digital library and will work on interdisciplinary methodologies, infrastructure and transnational access, description of archives

**Mr Adolf Knoll** is research director and will work on interdisciplinary methodologies, infrastructure and transnational access

**Mr. Jindřich Marek** is a member of the Department of Manuscripts and Early Printed Books and will work on interdisciplinary methodologies, infrastructure and transnational access, description of archives

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<sup>4</sup> Participation in several projects in the context of the German D-Grid initiative (<http://www.d-grid.de/>)

**Partner 8. Società Internazionale per lo studio del Medioevo Latino****Organisation and key competence**

The S.I.S.M.E.L. is a cultural institution whose main purpose is to promote research and documentation about the Latin Middle Ages, its cultural aspects and to organize the training of researcher. S.I.S.M.E.L. promotes a great number of projects and cultural programs with related publications and the creation of databases. S.I.S.M.E.L. has an internal organization to better coordinate the scientific projects: every specific sections operates in scientific autonomy. The value of the achievements can be measured by the instruments available to the scientific community of historians, and linguists: SISMEL periodically publishes catalogues of authors, texts and manuscripts («Medioevo latino. Bollettino bibliografico della cultura europea da Boezio a Erasmo (secoli VI-XV); C.A.L.M.A. Compendium Auctorum Latinorum Medii Aevi; Bibliotheca Scriptorum Latinorum Medii Recentiorisque Aevi; Clavis Scriptorum Italicorum Medii Aevi; RICABIM Repertorio di Inventari e cataloghi di Biblioteche Medievali). S.I.S.M.E.L. has a great attention to the innovative applications in human science, in fact created the website MIRABILE by which the scientific community can get to S.I.S.M.E.L.databases, the results of 30 years of research. SISMEL is a leader in national and international research projects for the creation of bibliographic and onomastics databases, publication of journals and collections, training courses equivalent to a higher PhD, conferences and seminars.

**Role in project**

SISMEL will bring key competencies in historical research in the medieval era to CENDARI, contributing in particular to WP 3 (“Methodology and Archive User Requirements”), WP 7 (“Knowledge Organisation Framework”) and WP 9 (“Research Processes and Technical Infrastructure”).

**Key Personnel**

**Professor Agostino Paravicini Bagliani** is President of SISMEL. He is also a Member of the Scientific Board of the ‘Revue Suisse d’histoire ecclésiastique.’ Director of the International Workshop on Medieval Societies (Erice, Centre E. Majorana for Scientific Culture), Delegate of the Swiss Academy of Human Sciences at the Academic International Union, Bruxell, and Delegate of the University of Lausanne to the Scientific Board of the Foundation of Swiss National Endowment for Scientific Research.

**Dr. Lucia Pinelli** has directed Medioevo latino for SISMEL since 1980. She is lector of CALMA since 2007 and she is the scientific director of MIRABILE since 2009.

**Dr. Silvia Agnoletti** has worked for S.I.S.M.E.L. since 2005 and is responsible for the international projects of S.I.S.M.E.L.

**Emiliano Degl’Innocenti** has worked for several years as the Acting Head of the Multimedia Lab at S.I.S.M.E.L.

**Partner 9. Fondazione Ezio Franceschini****Organisation and key competence:**

**The Fondazione Ezio Franceschini’s** mission is to research the European cultural heritage of the Middle Ages, concerning both Latin and romance traditions. FEF has an outstanding library, focused on Medieval history and literatures (ca. 150.000 items); part of it are the private libraries and/or personal archives of some among the most important italian XXth century medievalist scholars, such as Ezio Franceschini, Gianfranco Contini, Vittore Branca, Lorenzo Minio Paluella, Bruno Nardi, Tullio Gregory, Claudio Leonardi. On this basis, FEF promotes research in several medieval fields, namely textual philology, mysticism, music, IT for the humanities, and sponsors the publication of journals (“Filologia mediolatina”, “Medioevo musicale. Bollettino bibliografico della musica medievale”, “Stilistica e metrica italiana”) and series (“Archivio romanzo”, “La mistica cristiana tra Oriente e Occidente”, “L’Europe des philologues” together with the Collège de France, “Per Verba. Testi mediolatini con traduzione”, “La tradizione musicale. Studi e testi”, “Autographa Medii Aevi”). Particular attention is devoted to higher education, through a school of medieval studies (PhD level), conferences and seminars. An important issue in the FEF research activity is the creation of data-bases concerning authors, texts and manuscripts of the italian medieval literature (“LIO. Repertorio della lirica italiana delle origini”, “BAI. Biblioteca agiografica

italiana”, together with the Ecole française de Rome, “BIBITA. Le traduzioni italiane della Bibbia”, “CMIT. Censimento dei manoscritti di Iacopone da Todi”). FEF is the leading unit in a base-research project 2008-2011 “Archives of medieval manuscripts in the European cultural tradition” (funding by the Italian Govern, in a network with Universities of Firenze and Lecce, SNS Pisa and IUSS Pavia), whose purpose is to provide an innovative digital environment for the research on medieval manuscripts, in order to enable interoperability through the web repositories of digital datas about manuscripts.

### **Role in project**

FEF will bring key competencies in historical research in the medieval era to CENDARI, in particular as concerns the exploitation of key collections, contributing in particular to WP 3 (“Investigation and Description of Archives”), WP 11 (“Data Integration Infrastructure”) and WP 13 (“Research Spaces”).

### **Key Personnel**

**Professor Lino Leonardi** is Director of the Fondazione Ezio Franceschini, Firenze. He also holds a position as Professor of Romance Philology, University of Siena and Vice-Director of the European Doctoral School in Romance Philology, University of Siena. He is Member of the Accademia della Crusca, Firenze and Editor of the journal «Medioevo romanzo» and the series «Archivio romanzo».

**Emiliano Degl’Innocenti** has been a researcher for several years in the field of Computing in the Humanities at Fondazione Ezio Franceschini.

**Dr. Alessio Decaria** is editor of the “LIO. Repertorio della lirica italiana delle Origini” project at the Fondazione Ezio Franceschini, Firenze and also a Lecturer of Italian Literature at the Université de Genève.

## **Partner 10. The University of Stuttgart**

### **Organisation and key competence:**

The **University of Stuttgart** was founded in 1829, at the beginning of the industrial age in Europe, and has celebrated its 175-th anniversary in 2004. The cooperation between technical, physical and human sciences has always been an advantage of the University of Stuttgart. Today the university is a modern, achievement-orientated institution with a comprehensive range of subjects and a focus on technical and physical disciplines. It is administered by the state of Baden Wuerttemberg Ministry of Science, Research and Arts alongside the Wuerttembergische Landesbibliothek and the collections of the Bibliothek fuer Zeitgeschichte, whose contributions to CENDARI the Univeristy will coordinate.

The **Bibliothek fuer Zeitgeschichte - BfZ** (Library of Contemporary History) is one of Germany’s leading research libraries for 20th century history and politics, specializing among others in the history of both world wars. Being part of the Wuerttemberg State Library, Germany’s fourth largest state library, the BfZ currently holds approx. 380.000 books and 450 periodicals. Besides, the BfZ comprises a great number of archival collections relating *inter alia* to the war of 1914-1918: an extensive photographic collection with approx. 30.000 amateur and professional photographs, numerous political and military (wall) posters and pamphlets including leaflets dropped from airoplanes during the war and a map collection that holds more than 7.000 topographic and military maps with an emphasis on the western front line. Unique in its size is a collection of letters, postcards and other autobiographical material (also private war diaries) containing at present more than 125.000 letters to and from the fronts from both world wars. This collection of war-related Ego-documents is now one of the most sought-after archival collections for the new cultural interpretation (*Kulturgeschichte*) of the Great War.

During the last two decades the BfZ has developed into an internationally renowned research centre for World War I studies, not least due to the number and quality of its scholarly publications (see the series ‘Schriften der Bibliothek fuer Zeitgeschichte’ since 1993, published by Klartext Verlag, Essen, as well as the international First World War Encyclopedia edited by Gerhard Hirschfeld, Gerd Krumeich and Irina Renz, 2003, 3rd revised edition 2009, to which 146 scholars from 15 countries have contributed, English language edition forthcoming). A contributory factor has been a series of scholarly projects, conferences, workshops and exhibitions as well as regular public lectures and debates relating to the First World War which have been initiated and organized by the BfZ. The research library is part of an international network for World War I studies and collections with particular emphasis on French-German cooperation (Historial in Péronne, BDIC in Paris, BNU in Strasbourg).

Within the framework of CENDARI, the BfZ will, as lead partner of WP 1, oversee the Historiographical Guide to European history of the First World War. In addition the research library will host Ph.D.-

students and post-doc-researchers with a special interest in the histories of mentalities, everyday history (*Alltagsgeschichte*) and the visualization of the Great War.

### **Role in project**

The University of Stuttgart and the collections of the Bibliothek fuer Zeitgeschichte will play a critical role in consolidating and representing the community of resource-holders for the First World War.

### **Key persons**

**Gerhard Hirschfeld** is Professor of Modern History at the University of Stuttgart and the former Director of the Bibliothek fuer Zeitgeschichte.

## **Partner 11. Institut National de Recherche en Informatique et en Automatique, Leader WP 9**

### **Organisation and key competence**

INRIA is a world-class research institute in computer science and control operating under the dual authority of the Ministry of Research and the Ministry of Industry. It is dedicated to fundamental and applied research in information and communication science and technology (ICST). The Institute also plays a major role in technology transfer by fostering training through research, diffusion of scientific and technical information, development, as well as providing expert advice and participating in international programs. Being a founding partner of ERCOM, INRIA has been actively involved in putting together the W3C consortium as well as the Delos network in Digital Libraries.

### **Role in project**

In CENDARI, INRIA will lead WP 10 “Research Spaces,” creating a rich, flexible and intuitive structure for the portal and virtual research environment, which together will create the visible layer of the ‘enquiry environment’ CENDARI aims to create. It will also contribute to WP 2 (“Project Communications and Stakeholder Liaison”) to ensure DARIAH buy-in to the long-term future of CENDARI.

### **Key personnel**

**Laurent Romary** is directeur de recherche (research professor) as well as scientific advisor for scientific information at INRIA. He carries out research on the modelling of semi-structured documents, with a specific emphasis on texts and linguistic resources. Having led scientific information policies at both CNRS and Max-Planck Society, he has gained a strong experience in the optimal deployment of a research infrastructures at institution and national level, with a particular emphasis on providing services for the humanities. He also has a unique background in standardization issues, being the chairman of ISO committee TC 37/SC 4 (language resources), as well as chair of the Text Encoding Initiative council.

**Dr. Jean-Daniel Fekete** is directeur de recherche (research professor) at INRIA. He received his PhD in Computer Science in 1996 from [Université Paris-Sud](#). From 1997 to 2001, he joined the Graphic Design group at the [Ecole des Mines de Nantes](#) that he led from 2000 to 2001. He was then invited to join the [Human-Computer Interaction Laboratory](#) at the University of Maryland in the USA for one year. He is the Scientific Leader of the of the [INRIA](#) Project Team [AVIZ](#) that he founded in 2007. His main Research areas are [Visual Analytics](#), [Information Visualization](#) and [Human Computer Interaction](#). Jean-Daniel Fekete is Associate Editor of the International Journal of Human-Computer Studies ([IJHCS](#)), Paper Co-Chair of the [IEEE InfoVis Conference](#) in 2009-2010, Paper Co-Chair of the [IEEE Pacific Visualization conference](#) in 2011.

Additional staff will be assigned for the project start.

## **Partner 12. Consortium of European Research Libraries**

### **Organisation and key competence**

The **Consortium of European Research Libraries (CERL)** is a company limited under guarantee registered in London, United Kingdom (company no. 0294 2632). CERL is an active community of more than 190 libraries with notable holdings of early printed material. In close relationship with the community of scholars and researchers in the field of the European printed and written heritage, CERL has, since its foundation in 1994, provided services for both its member libraries and the scholarly community (see also [www.cerl.org](http://www.cerl.org)). CERL's original aim was to improve access to the scattered early

printed heritage of Europe, by collecting widely distributed, highly specialized and often hidden bibliographical information in one joint database and providing tools to facilitate use of bibliographical resources. With the evolving information landscape, came the realisation that in addition to the role of data provider, CERL needed to adopt the role of service provider. CERL's mission for 2010-2015 is: *To support the study of the book heritage of Europe by developing services that support integrated access to high-quality data; To develop and maintain a suite of sophisticated tools appropriate for the study of printed and written heritage materials of Europe by pooling resources and expertise; and To contribute to joint initiatives for the development of the digital infrastructure for the humanities, including the development and implementation of standards, especially those that facilitate interoperability.*

### **Role in the Project**

As the European network of expertise on printed and written heritage materials CERL has an eminent position to build onto existing resources to create a comprehensive suite of tools and services for every researcher interested in the study of the European book heritage. In the context of CENDARI, CERL will contribute to the development of digital infrastructure of the humanities by bringing in some of the tools and services it has developed in the last ten years (the CERL Thesaurus (including provenance data), and the Material Evidence in Incunabula). It will also manage the subcontracts to the regional partners as well as the funding to archives for vertical integration activities.

### **Key Personnel**

**Marian Lefferts** has been the Executive Manager of the Consortium of European Research Libraries (CERL) since 1998. Her tasks include work with the small Secretariat to formulate policies, strategies and development plans for CERL Services; liaison with data providers, consultants, business partners, and European organisations relevant to the remit of the CERL; financial oversight of the work done by and for CERL. Before taking up her position at CERL, she worked on the Illustrated Incunabula Short-Title Catalogue (published by Primary Source Media) at the British Library and the International Medieval Bibliographical on CD-ROM (published by Brepols) at the International Medieval Institute in Leeds.

## **Partner 13. The European Library**

### **Organisation and key competence**

The National Library of the Netherlands (KB) fosters the national infrastructure for scientific information and plays an important role in the permanent access to digital information at an international level. The KB has been involved in many international research projects in the field of digital libraries and hosts the offices of The European Library and Europeana. The European Library, launched as an operational service in March 2005, provides access to the digital and bibliographic collections of Europe's national libraries.

### **Role in the project**

The European Library will provide a rich content source for the CENDARI consortium offering particular collection strengths in both medieval and modern history. The European Library will also bring extensive metadata interoperability expertise to the CENDARI consortium, having developed two metadata standards; The European Library Application Profiles for Objects, based on and interoperable with the Dublin Core Library Application Profile (DC-Lib) and The European Library Application Profile for Collection Descriptions. The European Library is also actively involved in the development of the ISO International Standard Collection Identifier developed in ISO/TC46/SC9 which will facilitate the international exchange of collection-level metadata. The European Library has been aggregating the digital and bibliographic collections of the National Libraries of Europe since 2005 and will share this knowledge and expertise with the CENDARI Consortium. From January 2011, The European Library will extend its existing aggregation infrastructure to enable the aggregation of the digital and bibliographic content of all libraries in Europe in an efficient and sustainable manner. The software development process will also be undertaken using iterative software development practice. The usability and functionality of the tools will also be validated across the library-domain community.

### **Key personnel**

**Louise Edwards** joined The European Library in 2007 to head up the operational management and strategic development of the service. Louise has extensive experience of academic library management



and electronic publishing. Louise has a first degree in European languages (Russian/Spanish/Portuguese) and postgraduate degrees in Cultural Policy and Management and in Librarianship.

**Sally Chambers** is Collections and Metadata Manager for The European Library where she has been working since 2005. Prior to joining The European Library, she worked as Electronic Library Projects Coordinator at the University of London Library, where she led several digital library projects. Sally has a first degree in literature with psychology and postgraduate qualifications in cultural studies and information services management.

**Nuno Freire** is Interoperability Architect at The European Library. He holds an MSc in Informatics and Computer Engineering from the Instituto Superior Técnico of the Technical University of Lisbon. During his entire career he has been involved in international projects in the area of digital libraries. His areas of interest include interoperability, information retrieval and data quality, particularly in its application to digital libraries and catalogues.

**Andreas Juffinger** is Technical Manager at The European Library. He graduated from the Technical University Graz with a specialization on Web 2.0, Web 2.0 Crawling, Information Retrieval and Machine Learning (Statistical Learning Theory and Reinforcement Learning). He has worked on several European and nationally-funded projects as technical project manager.

**Aubéry Escande** is responsible for The European Library communication and editorial content. He is also the European Film Gateway project coordinator for Europeana. He has previously worked as a journalist for magazines and news websites.

#### **Partner 14. The University of Cassino**

##### **Organisation and key competence**

The University of Cassino was established in 1979. Because of its geographical position, the University is now a meeting point for the regions of southern Lazio, Campania and Molise. The university counts five faculties - Economics, Engineering, Arts and philosophy, Law, and Sport Sciences - 12,000 students, 336 faculty members, 13 departments, and 47 laboratories. It also counts 345 staff members, spread between Cassino and the branch campuses of Sora, Atina, Frosinone and Terracina. Students can choose from 18 first-cycle degree programs, 14 second-cycle degree programs, one single-cycle degree program, 10 master degree programs and 8 doctoral degree programs.

##### **Role in the project**

The University of Cassino will contribute to the medieval case study through their association with the Library of Montecassino, which holds one of the most relevant and important manuscript heritages in the world. This library holds 800 significant manuscripts, which will have highly relevant linkages with the SISMEEL databases.

##### **Key personnel**

**Professor Francesco Santi** is Professor of Medieval Latin literature at the University of Salento, Professor of Medieval Latin Literature at the University of Cassino and Collaborator with the National Research Council and member of the Institute of Humanities of Florence

#### **B.2.3 Consortium as a whole**

The CENDARI consortium members have been chosen for the expertise, networks and content they bring to the infrastructure. Although perhaps a small consortium by the standards of an EU project, it fully covers all of the necessary expertise for the delivery of the CENDARI objectives.

Partners 5 (KCL), 6 (UGOE) and 11 (INRIA) are all recognised centres of excellence for Digital Humanities, and major contributing partners to the DARIAH infrastructure and a raft of other projects, including the European Holocaust Research Infrastructure (EHRI), a parallel project to CENDARI in its aim to create a platform for historical investigation. Their participation will ensure that CENDARI does indeed fulfil its ambition to the creation of a technical platform truly beyond the state of the art for e-History, and that the achievements of CENDARI are fed back into the DARIAH development, becoming a model of best practice that can be adapted and reused by other communities of scholars in the humanities. They are joined by Partner 3 (SANU) and Partner 1 (TCD) in the technical development for the specific specialities of those two institutions, namely construction of the actual data infrastructure and

natural language processing, respectively. These additions will not only strengthen CENDARI, but also bring additional technical expertise into the DARIAH circle.

No technical infrastructure is useful unless it finds and inspires its users, however, which is why we have also incorporated a group of highly active (but not necessarily highly technical) scholars into the consortium. For the First World War, the three nodes we have included – Partners 2 (FUB), 4 (UOB) and 1 (TCD) are beyond doubt among Europe's top centres in the field, each hosting a Centre for War Studies and critical mass in the research area. Their activities will be supplemented by input from Partner 5 (KCL), who presents a similar profile but with complimentary strengths (specifically military history). For the medieval era, Partners 8 (SIS) and 9 (FEF) present a formidable centre of gravity and considerable expertise in the study of medieval Latin as a transmitter of cultural norms and practices. Their activities will be supplemented by input from Partner 1 (TCD), who presents a similar profile but with complimentary strengths (specifically colonialism and Britain and Ireland).

The final group of three partners bring different experience of resource development and curation for the scholarly communities, a key perspective to incorporate if we are to win the trust and cooperation of a significant portion of the relevant archives and other content holders for our two test cases. In particular, Partners 7 (NKP) and 10 (USTUTT) are two of the most respected archives for the First World War and medieval manuscript studies respectively. They each have large and significant collections, but bring very different experiences of making digital content available to scholars, with the former having taken a publicly-funded consortial route, and the latter engaging with a commercial publisher to digitise and deliver their objects. They are joined in their representation of the experiences of the curators of digital collections by Partner 12 (CERL) and 13 (EL). This partner's differences (as a consortium representing research libraries, but also as the owner of several significant and databases for the medieval era complimentary to those of NKP and SIS), will add an additional layer sensitivity to the needs and requirements of our stakeholders. This perspective will be enriched through the incorporation of further resources and collections held at partners such as TCD (whose library is known as the home of the iconic Book of Kells, but which also holds significant further material for both the medieval and modern eras) and KCL (whose Liddell-Hunt collection is of equal importance for military history).

These partners will be responsible for delivering the project aims: it would not have been possible to recruit all partners able to contribute relevant content and expertise to this status, however, as this would have been both unmanageable and unnecessary given the widespread application of common standards across European archives, museums and libraries. Over 70 archives, projects, and other institutions have been approached about allowing their metadata to be integrated within CENDARI or about acting as local content recruiters for their country or region. Many of these have been very glad to see such an integrative project as CENDARI being progressed and have submitted letters of support to the application (see list in section 3.1.2 below). Others have already indicated a willingness to work with us should the project be funded. We will therefore continue to add to our list of Associate Partners after the grant is active, as through these relationships we can access first content, then users, at a grass roots level.

### **Subcontracting**

Finally there is a small amount of activity to be delivered via subcontract. This covers certain services, namely auditing of accounts (multiple WPs) and for website development (WP 1), which will be procured in line with the policies of the institution where the costs are to be incurred. The largest single subcontract will enable CENDARI (WP8) to access the data held in the Manuscriptorium project. NKP has an exclusive contract for administrating and maintaining Manuscriptorium with AIP Beroun Ltd. (since 2 January 2010 to 31 December 2013). An investment of €40,000 will be required to enable access to Manuscriptorium, work which must be carried out by AIP Beroun due to the nature of the contract.

### **Additional Beneficiaries/Competitive Calls**

No additional beneficiaries other than the above-named are foreseen at this time. Should new beneficiaries be identified during the project, a process for acceding new partners is described in section B.2.1 above. The only competitive calls will be before the researchers to undertake transnational access. These calls will be managed in line with the Commission guidelines for transnational access.

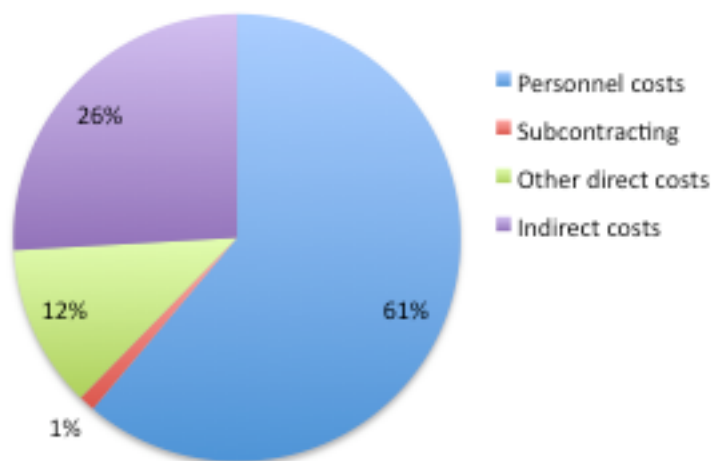
## B.2.4 Resources to be committed

### CENDARI Budget by Spend Category

#### Personnel

The budget requested to deliver the CENDARI project will largely be spent on personnel (61%). This is appropriate for a project of this type, where knowledge generation and consolidation will be carried out by scholars (historical, archival, technical), and project management for the full lifecycle and dissemination must also be sufficiently resourced for the project to succeed. With over a thousand person months of effort across the partners and disciplines involved, people will be CENDARI's biggest investment. Of these person months, 6% are dedicated to the management

of the project, 38% to the programme of networking and coordinating activities (including Transnational Access, which has 12 PMs dedicated to the management of the programme) that will bring the historical archival community and the content they use/hold together; and 56% in the design of a cutting-edge digital infrastructure that will organise and deliver this content to the remote user community.



**Other direct costs** (12%, €886K) are mostly dedicated to travel, for project team members to meet and discuss the project, for visits with archives and other content holders, for speakers and some attendees (young researchers) at the 12 CENDARI-hosted public workshops and other events and for the researcher mobility costs associated with transnational access (total €470K). Some hosting costs for these workshops are also included (eg space, catering, materials, etc.).

WP	Amount	Justification
1	€33,420	This workpackage includes non-pay budget for supporting travel and subsistence for consortium members to attend 5 full General Assembly meetings (a kick-off meeting plus one at end of each year of activity, each estimated as 15 people EU flight plus 1 hotel/3 people 2 night hotel) and 5 further individual journeys within Europe for the management team to deliver specific key tasks with partners. These are estimated as a 1 day journey plus moderate travel expenses (€290 per journey). It also includes budget for 4 meetings of the 8-member External Expert Advisory Board (EEAB, including 4 non-EU travel at estimated €750). The final conference has been allocated a budget of just under €19K to cover partner travel and subsistence, speakers, administration costs and hospitality.
2	€33,420	This workpackage has made provision for three regional launch events to be held at archive partners institutions with different specialisations (travel for partners plus event costs €4350 for partner travel and €2500 per event hosting costs); The workpackage will also host one workshop on the sustainability of integrated digital archival resources, with travel and subsistence budgeted for 8 speakers from across the EU (€2320 plus meeting hosting costs of €350). It also provides for 10 meetings across the four year period for meeting with partners to develop the business plan and long term access/handover protocols and to discuss cooperation with DARIAH and other potential long-term partners for the CENDARI development (€2100).
3	€18,800	This workpackage has made provision for 12 bursaries of €300 to each of the 3 summer schools (to ensure that early stage researchers have equal access to the training opportunities CENDARI provides). It also includes budget of €2000 each

		for the hosting costs for the Summer Schools (space and hospitality) and a hospitality budget of €2000 for the 5 one-day training workshops.
4	€16,822	Budget to cover the meetings and focus group sessions required for the technical advisory phase of the workpackage is held in WP 9. The 3 one-day workshops (1 generic, 2 medieval, 2 modern) and 5 seminars have been assigned a budget for hosting as well as travel and subsistence for the participants. It also holds a small amount €2464 for WP coordinator travel.
5	€99,712	The budget for this workpackage will largely be paying for the researcher capacity to create this information network among relevant museums, libraries, archives and other resource holders, with a total time investment of 168 man months. These researchers will be based at TCD, FUB, UOB (modern) and NKP, FEF, and UNICAS (medieval). Researcher travel and subsistence costs are very difficult to quantify accurately: visits will cost between 200 and 2000 Euro per visit, depending on the location and duration of the visits. A sum of €80,000 has been budgeted to cover these expenses. Finally, an allocation of 10 man months and travel and subsistence of just under €20K for travel and subsistence costs (32 journies at €616) has been allocated to CERL in order to coordinate the technical needs of archives that want to make their content available through CENDARI, but which need some technical consultancy in order to do so.
6	€24,640	There will be sharing among the technical workpackages of travel for their coordination meetings, therefore each technical WP holds budget for 2.5 people at 2 meetings per year, costed at 2 days at an average standard daily and overnight rate (416) plus an additional amount of €200 per researcher journey to cover travel costs.
7	€29,120	Given the additional costs for travel to and from Serbia (location of the lead partner) and the size of this workpackage, a travel allocation equivalent to 34 journies for 2 days/nights each at €675 (including travel) has been allotted. In addition, a sum of €6170 will be required to enable twice yearly travel between Munich and Belgrade for the WP Coordinator (250 flight+160 daily allowance+140 overnight)
8	€36,640	This technical WP holds budget for 2.5 people at 4 meetings per year, costed at 2 days at an average standard daily and overnight rate (416) plus an additional amount of €200 per researcher journey to cover travel costs. This WP also holds €12,000 to cover travel, subsistence, hosting costs and hospitality for participants in 2 focus group workshops.
9	€24,640	This WP holds budget for 2.5 people at 4 meetings per year, costed at 2 days at an average standard daily and overnight rate (416) plus an additional amount of €200 per researcher journey to cover travel costs.
10	€98,700	Researcher mobility for the NKP has been costed on the basis of the standard daily and overnight rates for the Czech Republic (€230) for an average of 65 nights per researcher. An additional amount of €200 per researcher has been budgeted to cover travel costs.
11	€82,020	Researcher mobility for the USTUTT/BfZ has been costed on the basis of the standard daily and overnight rates for Germany (€208) for an average of 65 nights per researcher. An additional amount of €200 per researcher has been budgeted to cover travel costs.
12	€99,960	Researcher mobility for TCD has been costed on the basis of the standard daily and overnight rates for Ireland (€254) for an average of 65 nights per researcher. An additional amount of €200 per researcher has been budgeted to cover travel costs.
13	€108,540	Researcher mobility for KCL has been costed on the basis of the standard daily and overnight rates for the UK (€276) for an average of 65 nights per researcher. An additional amount of €200 per researcher has been budgeted to cover travel costs.
14	€82,020	Researcher mobility for UGOE has been costed on the basis of the standard daily and overnight rates for Germany (€208) for an average of 65 nights per researcher. An additional amount of €200 per researcher has been budgeted to cover travel costs.

In addition, a total of 24 journeys at €616 (average rate for 2 days/nights plus 200 for travel) have been allocated across partners without specific workpackage leadership, but where lateral connections between their work and that of other partners is foreseen, and meetings are very likely to be required for coordination of these efforts. Total: €59,136 across 6 partners

### Materials

A sum of just over €5K has been allocated for the creation, production and distribution of the training materials developed under WP 2. An additional sum of €20,000 will be used to cover any materials costs of producing the archive description, eg in cases where editing or translation services are required.

### Equipment

Over and above these travel and subsistence-related amounts, allocations are made for equipment to provide the CENDARI portal services and support certain staff members' contributions to the project are included. This equipment will be solely used for the CENDARI project and will have reached the end of its amortised useful life by the end of the project.

2x Servers (eg Dell Poweredge R710)	€32,514
2x Laptop with screen and dock (eg Dell Latitude E6420)	€2,565
<b>Total</b>	<b>€35,080</b>

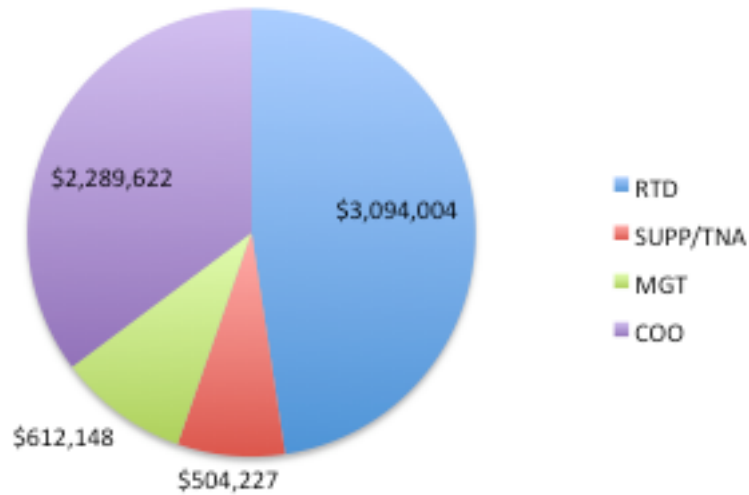
The server will be housed at UGOE and associated with primarily with the activities of WP8. The provision of appropriate and sufficient data storage to house the software tools, underlying data and data registries (that is the references allowing integration of the archival collections) is an essential component of the project, and the equipment will be depreciated at locally applicable rates.

### Subcontracting

Finally there is a small amount of budget (1%, €95K) assigned to subcontracting. This covers certain services, namely auditing of accounts for those partners with budgets in excess of €375,000 (TCD, UGOE, FUB, KCL, UOB, WPs 1, 8, 6 and 3), costed at local institutional normal rates (total €36,900) and for website development (€12K, WP 1), which will be procured in line with the policies of the coordinating institution (TCD) where the costs are to be incurred. The largest single subcontract will enable CENDARI (WP 7) to access the data held in the Manuscriptorium project. NKP has an exclusive contract for administrating and maintaining Manuscriptorium with AIP Beroun Ltd. (2 January 2010 to 31 December 2013). An investment of €40,000 will be required to enable conversion of Manuscriptorium, to interoperate with CENDARI, work which must be carried out by AIP Beroun due to the nature of the contract. Given the huge corpus of data this will unlock for CENDARI, this investment is essential, and cannot be achieved by other means.

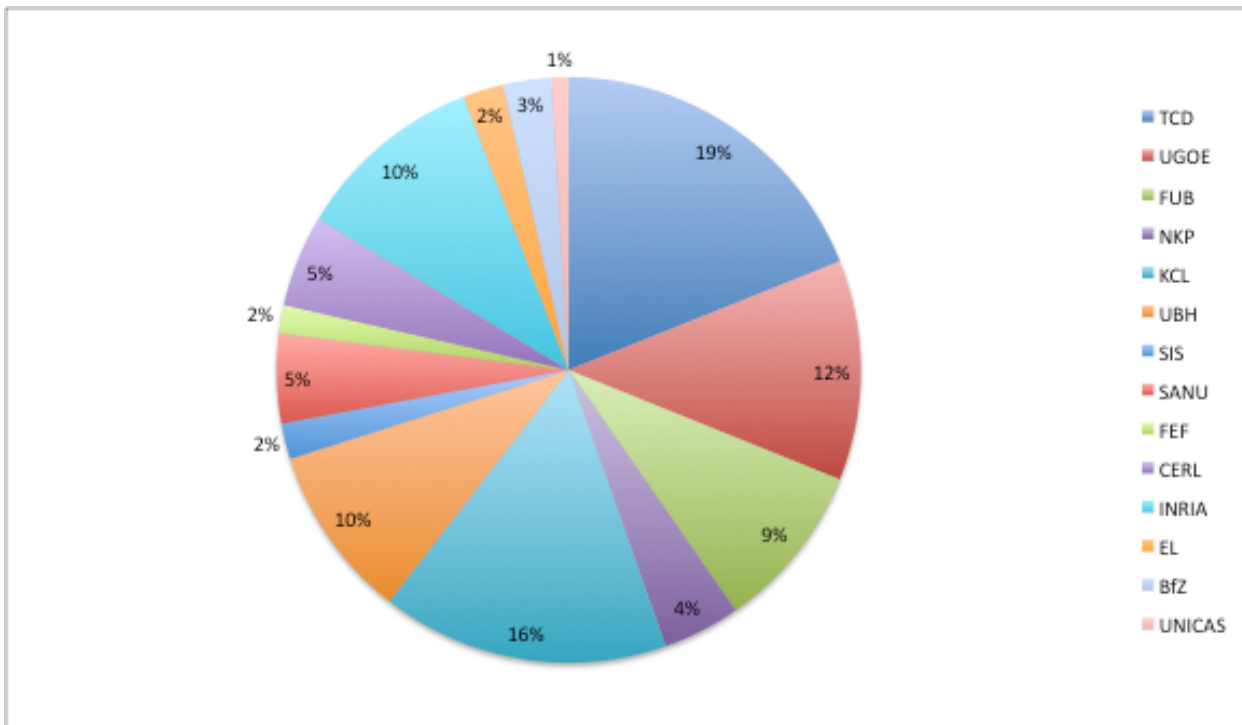
### CENDARI Budget by Activity Category

Viewed another way, the CENDARI spending allocation breaks down into 52% RTD (€3.1 M), 39% Coordinating Activities (€2.3 M) and ca 8% each management (€612K) and transnational access funding (€504K – for mobility only, thereby representing a far larger investment as the institutions are not claiming their own costs for the support of these researchers).



**CENDARI Budget by Partner**

Finally, the breakdown between partners is also of relevance. The largest partner is, not surprisingly, the Coordinator, with a 19% share of the budget. One further partner which has a large share is the primary technical lead, KCL. The remaining partners fall roughly into three groups: large contributors (10-11% share), medium partners (4-7% share) and small partners (1-2% share). This distribution will allow a reasonable input by all partners according to their desire to contribute and mode of participation. In spite of these levels of participation, all partners are fully committed to the project and recognize substantial benefit to be gained from participation in it, and are therefore making substantial commitments of contribution of knowledge and infrastructural resource that will complement the EC investment.



**B.3. Potential Impact**

### B.3.1 Strategic impact

CENDARI will create a unique and widely applicable research infrastructure of the highest quality. It has been conceptualized so as to bring a trans-national dimension to the historical archive landscape, leveraging prior investment in digital production without allowing the uneven pattern of these investments drive the direction of historical enquiry. As such, it will achieve:

1. **A paradigm-shifting research infrastructure**, through the creation of an ‘enquiry environment’ for humanities research on archives of contemporary history;
2. **World class research outputs**, based on the unique constellation of materials brought together and the new methodologies being developed to use them;
3. **Effective knowledge sharing**, not just between scholars, but between content holders at different points on the spectra of size, type and digital preparedness.

It will also contribute specifically to the Europe 2020 Strategy and the Digital Agenda for Europe by: widening the application of technology in historical research and deepening our understanding of how technology can enhance and bring efficiencies to research in these fields. This will not only spark innovation (which is generally recognized to be fostered by environments where very diverse fields of knowledge – such as computer science and historical research – come together) but also introduce skills necessary to the modern economy to the generation of young researchers, many of whom will not end up in academic posts, but rather enter the public and private sectors in other roles, or indeed even found new enterprises as entrepreneurs. Further, it will support the European Commission’s desire to develop high quality research infrastructures across the disciplines, as per the ESFRI roadmap, and expand Europe’s capability in the growing field of Digital Humanities, as per the European Science Foundation’s strategy.

For the archival community, the CENDARI developments will give them a substantial boost toward cooperation and knowledge sharing in a rapidly changing area where they are seeing huge demand from their users and other stakeholders. The ability to overcome the funder-driven local and national perspective and learn from internationally recognized experts such as the DARIAH partners will be of great benefit and bring and overall positive impact on the professional development of archival practices within Europe and coordination among diverse systems. In addition, the opportunities that will be afforded to the smaller archival partners, to increase the flow of relevant researchers into their facilities and become integrated into a community of information providers will be of huge benefit for them, addressing compounded historical factors that had prevented appropriate development in some institutions and/or regions.

For the historical research community, CENDARI’s impact will also be significant. Even if CENDARI was only to envision the most modest of its goals, that is the provision of centralised access to major collections and descriptions of collections that are geographically distributed, this would already provide a significant new resource to scholars, in particular those without guaranteed access to substantial funding for research materials or travel (eg due to career stage, financial or institutional restrictions). The technology aspects of the project will deliver far more than federated access, however, as the platform will also accommodate new tools for approaching previously unimagined research questions that would have been too time intensive to approach, such as iterative searching, ontological cross searching, and geospatial/geotemporal approaches, among others. By integrating and enhancing the large variety of fairly ‘dirty’ data types and sources into a central resources designed by the users, CENDARI will also be able to influence work in other data communities, as a model for digital infrastructure development relevant not only for historical data, but for biomedical images, environmental data, and other scientific fields. Projects like CENDARI not only push the barriers of what e-infrastructures are able to do (historical and humanistic data generally being quite ‘dirty’) they also bring new user communities into the general conversation about e-infrastructures (such as DARIAH), thereby increasing their value and relevance.

Although the CENDARI project will not itself be created as a tool for the use of schools or the general public, the data it contains will be easy to adapt for and by these audiences. In this manner, CENDARI will contribute to the agenda to draw young people into advanced study of history, and give all citizens a platform to expand their understanding of their place in the European Community. This will further enhance CENDARI’s impact on the ‘knowledge triangle’ of research, education and innovation, enabling not only high-level knowledge creation by trained scholars, but curiosity-driven investigation far beyond this cohort.

These impacts are all either directly or implicitly deliverable through the realization of the work package structure outlined above. In particular, WP 2 and 4 will ensure we have wide access to content and to expertise; WP 3 that we understand and harness the opportunities we create; WPs 7 and 10 will ensure that what we build is what scholars want, need and are willing and able to use; WPs 8 and 9 will ensure that the platform works effectively and efficiently, so as not to lose users due to slow or ineffective performance; WP 2 will also ensure that results are communicated and that the resource is available well into the future.

### **Added value of carrying out the work at European level**

As has been stated above, there are both superficial and much deeper intellectual reasons for the transnational approach taken by CENDARI, including, for example, the need to overcome national and/or institutional approaches to data in the former category, and the need to create the conditions required for truly comparative historical research to occur in the latter. There are pressing needs to approach these subject areas as a European and even global set of paradigm shifts, a movement which is currently hampered by historically-determined state of archives. As an agent for efficient research, therefore, as well as an agent for wider cultural change among archives, overcoming digital divides between institutions, and member states and regions, CENDARI must be delivered at a European level. The argument for a transnational approach is made even stronger, however, when viewed in the context of the localized outputs of many smaller projects and previous investment that will be able to be leveraged through CENDARI, not least of which being the DARIAH umbrella infrastructure itself.

Beyond the technical, the knowledge transfer between and among museums, libraries and archives from across Europe will deliver benefits on a large scale for those communities, just as the opportunities created for overcoming parochial perspectives on the history of critical period of European history will benefit scholars in their search for methodologies supporting truly comparative approaches.

### **Assumptions and external factors that may influence the impacts**

Much of this area of concern is covered in detail in section 1.3 above (Risk Assessment). Clearly a project like this moves forward in an environment where the technological ground rules can change and will rapidly as new standards and technologies are created and adapted. We feel that the CENDARI project is relatively safe from being surprised by any unforeseen developments by the profile and expertise of its partners. Changing global economies and political landscapes generally can also have an effect on a project like this, but again, we feel that the time is ripe for this project, and that the overall environment could not change rapidly enough from the currently receptive state to harm the project within its term of development. On a more micro level, we have identified three further areas where we may influence, but not fully control our environment, namely:

- As a process of culture change, some players, in particular smaller archives, may not feel unsure of their role, and vacillate in their participation;
- Only a minority of the total number of items is digitised as yet, and this is not a digitisation project;
- Sustainability, and need for models to ensure infrastructure remains vibrant beyond funded period, will remain highly contingent on the wider economic and political environment.

All of these factors can be mitigated by appropriate networking, trust-building, and consultation during the project's funded period.

### **B.3.2 Plan for the use and dissemination of foreground**

The dedicated workpackage for “Dissemination and Sustainability” (WP 2) in the CENDARI project will provide a number of outlets for the use and dissemination of the outcomes of the project. The portal will be freely and openly available, but potential users will first need to be made aware of its presence, and then be given a basis for understanding how to apply it as a tool for archival investigation. The first of these goals will be met by the generic communications programme: website, promotional materials, launch events etc.. The second goal will be met by the more in-depth aspects of the CENDARI dissemination programme, in particular the training events, expert seminars, focus group and other networking events and stakeholder meetings. Each of these elements is intended to create for a different segment of the total user audience for CENDARI a customised delivery to build awareness, trust and investment in the benefits CENDARI provides.



Further aspects of the project will be disseminated to specific user communities for reuse within those communities. Technical standards and innovations in the delivery and enhancement of federated content will be shared via networks, presentations and publications with the archival and technical communities. In particular the development of the underlying ontologies for the subject areas and the integration of tools into a user-sensitive interface should have significant impact in these fields. The historical community will, on the other hand, be more interested in the opportunities an infrastructural development like CENDARI opens for greater visibility over distant archives, and more integrated approaches to comparative historical studies.

### **Practical steps to ensure effective dissemination**

In addition to the general programme outlined above, the following specific actions will be taken:

- The technology platform will be available for potential adaptation to other shared networks or research areas (e.g. the extant projects under development at the partner institutions, listed under section 3.1 above). This will be facilitated by the fact that work within the CENDARI platform will be carried out within an open source, creative commons environment, enabling the results, once disseminated, to be further developed by interested scholars and technology experts.
- A dissemination roadmap will be developed and published at an early phase of the project. This will include a variety of conventional outlets relevant to our medieval and modern test cases and their communities, such as conferences and journals, but also web-based information sources such as bulletin boards and listservs, media outlets ranging from popular history magazines to newspapers and television, research councils and other stakeholders at the national level within partner countries and across the European Union, special interest groups internationally (disciplinary- and technologically-focused) with access to a membership list.
- Methodological extension beyond the initial core of historical researchers is included within the deliverables of the project and will ensure a much wider scholarly user base than can now be estimated, to include art historians, linguists, literary scholars, cultural theorists, sociologists interested in the origins of modern society, practicing artists, and others. This project will be shared with our expanding group of library, museum and archive partners.
- Participation by the project team members in international workshops, seminars and conferences held during the project lifecycle, including Digital Resources in the Arts and Humanities, Digital Humanities, UK e-Science All Hands meetings and others, will be sought specifically in order to solicit input on the overall project and developing the community of interested humanities researchers.
- Attention from European and international media will also be invited for the project, in particular through the specialized contribution of the coordinating institution's Outreach and Communications Officer.
- As it develops, the CENDARI platform will be integrated into the undergraduate and postgraduate education programmes of the partner institutions, thereby facilitating knowledge transfer to the youngest generation of researchers as well as to established scholars.

WT3/WP 3 contains full details of the planned programme of dissemination, publicity, public engagement and training.

### **Management of Intellectual property**

IP produced by the project will be retained by the authors and host institutions, but made freely available on a non-exclusive license as required by the European Commission. The right to authorship is determined based on whether the putative author made a substantial contribution to each of the following:

- The idea and design of the project, the collection of data, or the analysis and interpretation of data.
- Drafting or revising the principal intellectual parts of the content (metadata, research guides, methodologies etc).
- Approving the final version for publication.

Any software created during the project will be made available to the community on an OSI-approved open source basis. We will respect the license model of any third party software used during the project, and collaborate closely with the license holders. During the project lifetime, great care will be applied to the protection of knowledge and the accurate identification of its owners. These measures guarantee that exploitation of project results will not be unreasonably impeded.

Inside CENDARI, we will establish an open culture of sharing research and development results, which we allow for a liberal application of IPR within the project. This will allow for a smooth and seamless integration of partners into distributed project deliverables.

The Grant Agreement which establishes the relationship between CENDARI and the European Commission, will be complemented by a Consortium Agreement (based on the standard format in use at Trinity College Dublin for the management of European Commission-funded projects based within the institution), which will ensure the formal agreement and commitment of the Partners on the rules for confidentiality, liability, publicity and on the IPR regime to be applied during the project lifetime and beyond.

### **Contributions to standards**

As mentioned above, technical standards and innovations in the delivery and enhancement of federated content will be shared via networks, presentations and publications with the archival and technical communities. In particular the development of the underlying ontologies for the subject areas and the integration of tools into a user-sensitive interface should have significant impact in these fields. These contributions will find immediate ground for reuse through the reciprocal relationship between CENDARI and DARIAH.

### **Contribution to policy developments**

The lessons of the CENDARI development will be highly relevant in policy formation for research infrastructures generally and e-infrastructures for the humanities more specifically. National governments across Europe seen to be in urgent need of data to inform policy on the preservation and communication of cultural heritage, and it is here in particular CENDARI will be able to make an impact.

### **Risk assessment and related communication strategy**

A project-level Risk Assessment, including the impact of identified potential risks on the communications and dissemination strategy, can be found in section 1.3 above (Risk Assessment).

### **B.4. Ethical Issues**

The project does not raise any ethical issues that have been identified.